M320
GRENADE LAUNCHER

MAINTANANCE
STUDENT HANDOUT

FOR TRAINING USE ONLY

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LESSON OBJECTIVES

LP-M320 - 1 INTRODUCTION

ACTION: Provide and explain to the student the basic course content, schedule, and use of training materials

CONDITION: Classroom

STANDARDS: Student will become familiar with the basic course content, schedule, and use of training materials, and course administration data.

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LESSON OBJECTIVES

LP-M320 - 2 SAFETY

ACTION: Provide and explain to the student the basic course content, schedule, and use of training materials

CONDITION: Classroom

STANDARDS: Student will become familiar with the basic course content, schedule, and use of training materials, and course administration data.

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LESSON OBJECTIVES

LP-M320 – 3 PREVENTATIVE MAINTENANCE CHECKS AND SERVICES

ACTION: The students will be able understand and proficiently use associated Technical Manuals for PMCS of the M320

CONDITION: Classroom

STANDARDS: Student will able to perform PMCS on the M320 without damage to personnel or equipment

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LESSON OBJECTIVES

LP-M320 – 4 FIELD LEVEL MAINTENANCE

ACTION: Provide the student with the skills and knowledge to identify proper maintenance procedures required to remove, repair, service, lubricate and replace all major components authorized for Field level Maintenance on the M320

CONDITIONS: In a classroom environment given a fully functional M320, Small arms tool kit, Special tools and appropriate TM's

STANDARDS: Student will demonstrate the Field level maintenance procedures necessary to maintain the M320.

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LESSON OBJECTIVES

LP-M320 - 5 REVIEW, PRACTICAL EXERCISE, CRITIQUE

ACTION: Review and evaluate the skills and knowledge which the student aquired throughout the course

CONDITION: Classroom

STANDARDS: Student will answer check on learning questions, and participate in a classroom discussion to review the course. Students will complete a course critique before course completion

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COURSE INTRODUCTION

STUDENT GUIDE
M320
References:

Student Handout

TM9-1010-232-10
TM9-1010-232-23&P

Welcome to the M320 Grenade Launcher Maintenance course.

The purpose of this course is to familiarize you with the proper field maintenance procedures specific with the M320 Grenade Launcher. You will be instructed to perform maintenance tasks for the M320 IAW the applicable Technical Manuals.

Given the information in a classroom you will receive instruction on the administrative policies and an overview of entire course in accordance with (IAW) the POI.

ADMINISTRATION

- FIRE EXITS
- FOOD/DRINKS
- CELL PHONES
- BATHROOMS
- QUESTIONS

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CLASSROOM OPERATIONS

The M320 maintenance class will be a lecture type class with hands on participation. Students will be instructed on how to properly perform a maintenance task that is within their maintenance level. After a specific task has been briefed, the students will then be able to practice the task with the direct supervision and guidance of the instructor.

Performance evaluations will be dependent on the situation and resources available. If the situation permits, a group of students will be asked to perform a certain maintenance task correctly under the observation of the instructor. Variations of the evaluation could include question and answers and a written test.

The schedule for breaks will be approximately 10 minutes for every 50 minutes of instruction. The ratio can be changed so that there is not a break in the middle of a block of instruction or for certain administrative tasks. A senior ranking student (class leader) in the class will be asked to take charge of the mobility of the students to make sure that they are on time returning from breaks. The class leader should also ensure that the students are paying attention and comprehending the training. At any time the class leader may make any suggestions to the instructor concerning classroom operations.

Maintenance of the classroom will be done IAW local Standard Operating Procedures (SOP). Students may consume food and drinks in the class as long as trash is policed up and it does not interfere with instructions.

Weapons will be under the direct supervisions of at least one student during breaks, or absences of students. Weapons do not need to be supervised only when secured IAW local SOP.

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CLASSROOM SAFETY

Follow instructions and do not work ahead of instructor.

Ask questions to prevent damage to equipment or lost parts.

Army approved eye protection is required for most maintenance procedures.

Jewelry and other “snag” hazards should be removed prior to performing maintenance tasks.

Observe the proper use of tools

Use each tool as how it was intended.

Use the right tool for the job.

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DEFINITION OF SAFETY ICONS, WARNINGS, CAUTIONS, AND NOTES

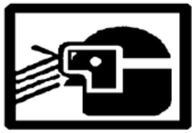
The **WARNINGS**, **CAUTIONS**, and **NOTES** are always found in the first pages of the -10 and 23 manuals.

WARININGS: Identifies a clear danger to the person performing that specific procedure.

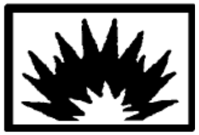
CAUTIONS: Identifies risk of damage to equipment if the task is not performed properly.

NOTES: Used to highlight essential procedures, conditions, statements, or convey important instructional data to the user.

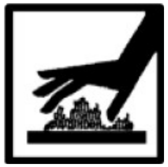
Explanation of Safety Warning Icons



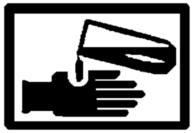
EYE PROTECTION – Person with goggles shows that material will injure the eyes.



EXPLOSION - Rapidly expanding symbol shows that the material may explode if subjected high temperatures, sources of ignition, or high pressure.

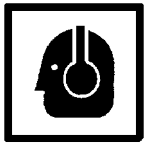


HOT AREA – Hand over object radiating heat shows hot surfaces that can burn unprotected flesh.

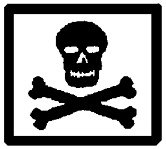


CHEMICAL – Drops of liquid on hand shows that materials can cause burns or irritation to hands or tissue.

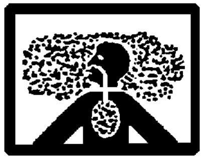
Explanation of Safety Warning Icons



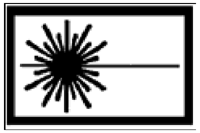
EAR PROTECTION - Headphones over ears shows that noise level will harm ears.



POISON - Skull and crossbones shows that material is poisonous or a danger to life.



Vapor – Human figure in a cloud shows that material vapors present a danger to life or health.



LASER LIGHT - laser light hazard symbol indicates extreme danger for eyes from laser beams and reflections.

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PMCS

Table 1. Preventive Maintenance Checks and Services for M320 Grenade Launcher (GL) - Continued.

Item No.	Interval	Man-Hour	Item To Be Checked or Serviced	Procedure	Equipment Not Ready/Available If:
1 (Cont)	Quarterly (Cont)		GL with or without M16 Series Rifles or M4 Series Carbines (Cont)	**WARNING** **Cleaning solvent is flammable. Do not clean parts near an open flame or in a smoking area. Cleaning solvent evaporates quickly and has a drying effect on the skin. When used without protective gloves, this chemical may cause irritation to, or cracking of, the skin.**	
				NOTE Solid film lubricant (SFL) (item 4, WP 0044) is the authorized touchup for GL and may be used on up to one third of the exterior finish of the receiver. FOR CONUS USE ONLY: SFL may be used as a touchup without limitation on the receiver assembly. This is to say that units which DO NOT fall under the category of Divisional Combat Units or rapid deployment type units may have up to 100 percent of the exterior surface of the receiver assembly protected with SFL. Prior to application of SFL, the surface must be thoroughly cleaned and inspected for corrosion and/or damage. If corroded or damaged, the part must be repaired or replaced prior to application of SFL. Continued use under combat conditions would result in an unprotected surface when the SFL wears off. This would result in a large light reflecting surface and accelerated deterioration of the unprotected surface. Therefore, Divisional Combat Units and units which fall under the definition of Rapid Deployment type must adhere to the limitation of NOT over one third of their exterior surface covered by SFL.	

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Table 1. Preventive Maintenance Checks and Services for M320 Grenade Launcher (GL) - Continued.

Item No.	Interval	Man-Hour	Item To Be Checked or Serviced	Procedure	Equipment Not Ready/Available If:
				d. SH – If one third or more of the receiver is missing its exterior protective finish, resulting in an unprotected or light reflecting surface, it is a candidate for overhaul. The missing finish is considered a shortcoming. This shortcoming requires action to obtain a replacement weapon. Once a replacement has been received, evacuate the original weapon to depot for overhaul. Once the missing exterior protective finish of the receiver has exceeded one third of its total surface, the probability of reclaiming the receiver during overhaul diminishes rapidly. In order to extend the life of the receiver, which is the serial numbered item, it is necessary to evacuate the weapon to depot once the missing finish reaches one third of the total surface of the receiver. Thoroughly clean areas that are to be touched up using cleaning solvent (Item 7, WP 0044). Touch up shiny exterior surfaces with solid film lubricant (Item 4, WP 0044).	
2	Quarterly		Function Check	a. Ensure selector lever rotates from "S" to "F" and back to "S". Selector lever must seat firmly at each position with an audible click.	a. Selector lever fails to rotate in either direction or fails to seat firmly into either position.
				b. With weapon unloaded, pointed in a safe position, and selector lever in "S" position, attempt to pull trigger rearward. Trigger must remain in forward position with no rearward travel.	b. Trigger moves to rearward (Fire) position or shows excessive movement toward rearward (Fire) position.

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PMCS PROCEDURES - Continued

Table 1. Preventive Maintenance Checks and Services for M320 Grenade Launcher (GL) - Continued.

Item No.	Interval	Man-Hour	Item To Be Checked or Serviced	Procedure	Equipment Not Ready/Available If:
2 (Cont)	Quarterly (Cont)		Function Check (Cont)	c. With barrel pivoted outward and selector lever in "F" position, pull trigger and detect firing pin protrusion with light finger pressure on breech face.	c. Firing pin protrusion cannot be detected.
				d. Press barrel release button allowing barrel to pivot outward. Place selector lever in "S" position. Firing pin, located on hammer, must not protrude from bolt face into chamber.	d. Firing pin, located on hammer, protrudes from bolt face into chamber.
				e. Press barrel release allowing barrel to pivot outward. Place selector lever in "F" position. Press barrel release while attempting to pull trigger. It must not be possible to pull trigger rearward enough to raise and release hammer while pressing upward (release position) on barrel release.	e. Trigger can be pulled rearward enough to raise and release hammer while barrel release is pressed upward to release position.
3	Quarterly		Receiver Assembly	Inspect for burrs, nicks, wear, or other damage.	Receiver assembly has burrs, nicks, wear, or damage that prohibits proper functioning.
4	Quarterly		Barrel Assembly	Visually inspect barrel assembly for bulges, dents, or cracks.	Barrel has bulges, dents, or cracks.
5	Quarterly		Leaf Sight Assembly	Check for looseness or damage to leaf sight.	Leaf sight is loose or damaged.

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Table 1. Preventive Maintenance Checks and Services for
M320 Grenade Launcher (GL) - Continued.

Item No.	Interval	Man-Hour	Item To Be Checked or Serviced	Procedure	Equipment Not Ready/Available If:
6	Quarterly		Barrel Rubber Stop	With barrel assembly installed on receiver assembly, move barrel assembly outward to barrel rubber stop. Barrel rubber stop must prevent barrel assembly from being removed from receiver assembly.	Barrel rubber stop does not prevent barrel assembly from being removed from receiver assembly.
7	Quarterly		Barrel Rubber Pin	Check for missing rubber pin. SH – Replace when possible.	
8	Quarterly		Barrel Release Lever	Pivot barrel assembly inward to close. Barrel release lever must lock barrel assembly fully closed.	Barrel release lever does not lock barrel assembly fully closed.
9	Quarterly		Day/Night Sight Assembly	**WARNING** **Do not stare into the laser beams. Do not look into laser beams through binoculars or telescopes. Do not point laser beams at mirror-like surfaces. Do not shine laser beams into another person's eyes. Persons operating laser and adjacent personnel shall wear proper laser eye protection.** **NOTE** Verification of laser functions requires Night Vision Goggles and low light environment.	
				a. Inspect for damaged parts.	a. Day/Night Sight is damaged.

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Table 1. Preventive Maintenance Checks and Services for M320 Grenade Launcher (GL) - Continued.

Item No.	Interval	Man-Hour	Item To Be Checked or Serviced	Procedure	Equipment Not Ready/Available If:
9 (Cont)	Quarterly (Cont)		Day/Night Sight Assembly (Cont)	b. Check function of range adjustment knob and modes of operation. Refer to TM 9-1010-232-10.	b. Range adjustment knob does not function or modes of operation for the laser do not function.
				c. Check for presence of safety block.	c. Safety block is missing.
10	Quarterly		Laser Range Finder	**WARNING** **Do not stare into the laser beams. Do not look into laser beams through binoculars or telescopes. Do not point laser beams at mirror-like surfaces. Do not shine laser beams into another person's eyes. Persons operating laser and adjacent personnel shall wear proper laser eye protection.**	
				Ensure Laser Range Finder is operating properly. Refer to TM 9-1010-232-10.	Laser Range Finder is not operating properly.
11	Annual		GL with or without M16 Series Rifles or M4 Series Carbines	Perform annual gaging (refer to WP 0023)	Annual gaging has not been performed within the last year.

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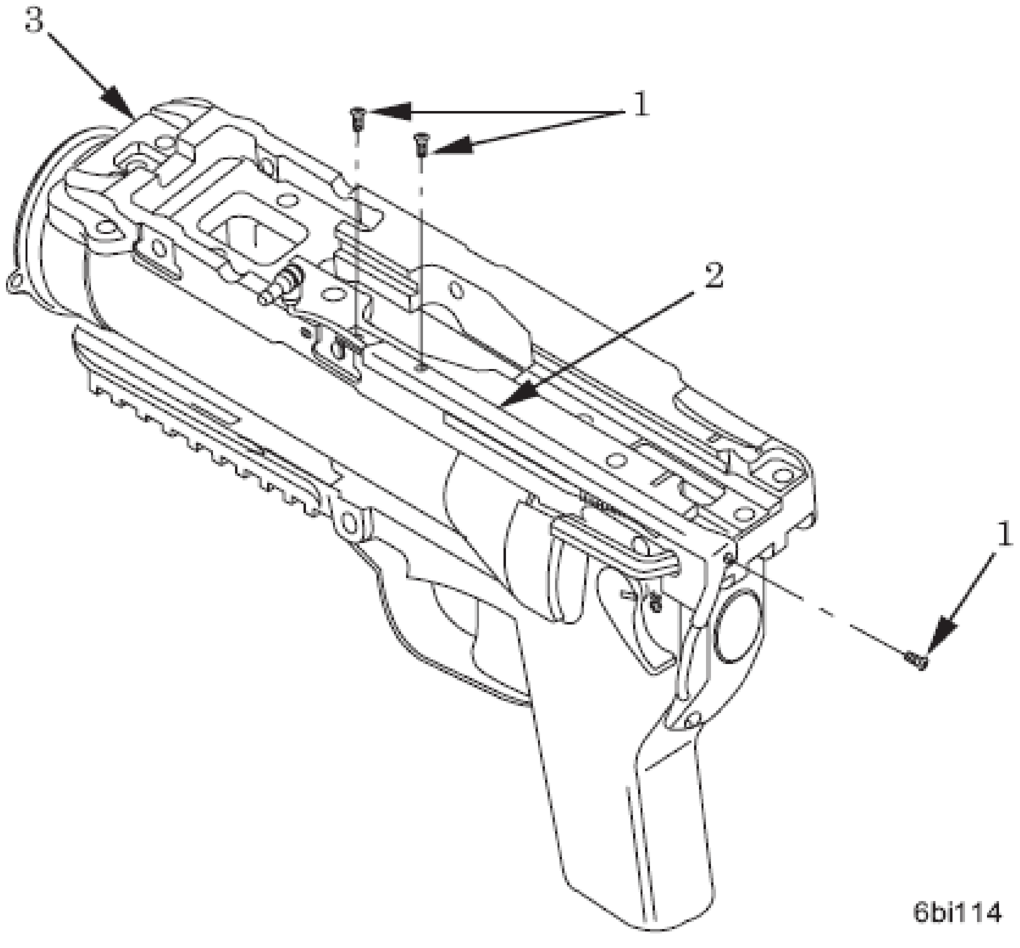
Maintenance
M320 Disassembly

1. Remove three screws (1) securing remote cable assembly (2) to receiver (3).

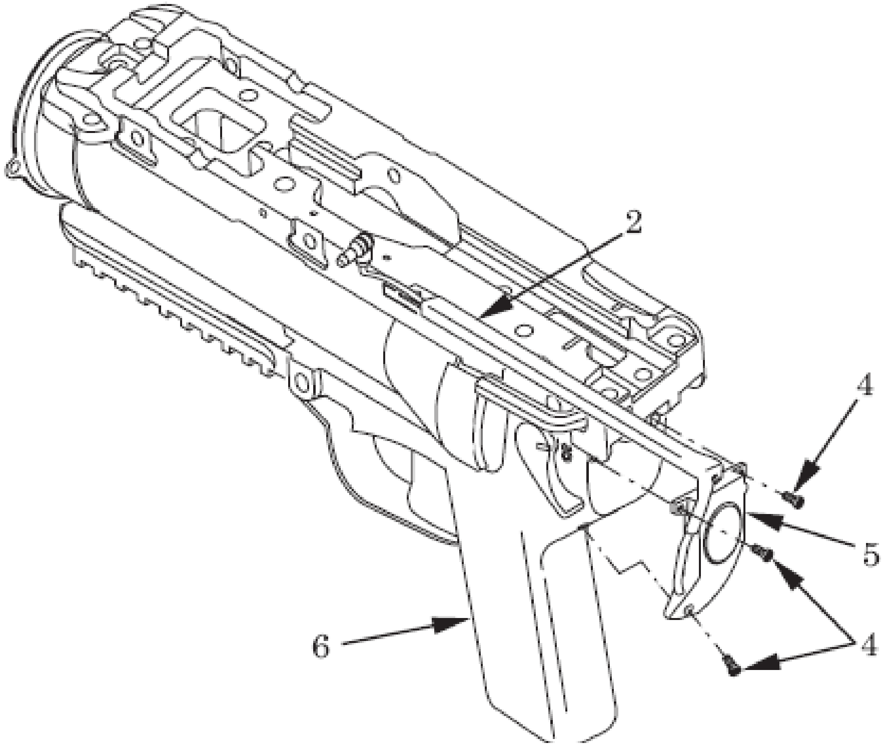


Maintenance
M320 Disassembly Cont.

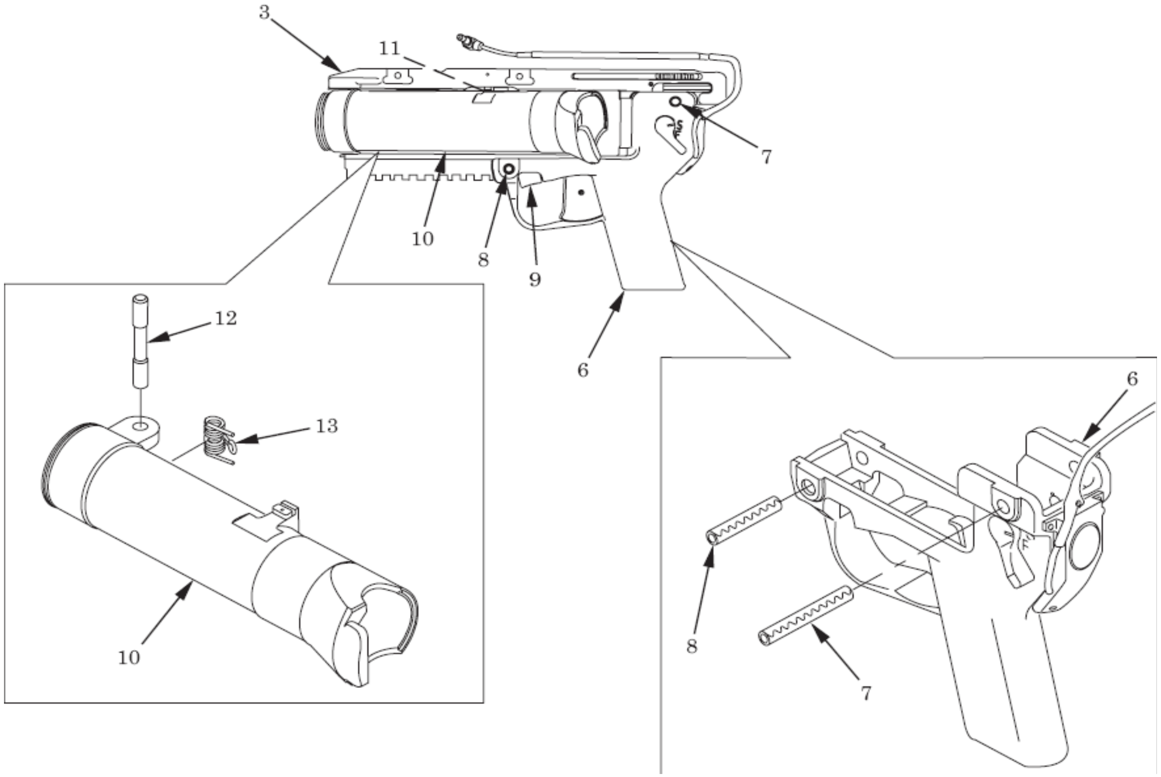
CAUTION

Step 2 is for removal of the three screws securing the remote cable switch to the pistol grip assembly. DO NOT perform step 2 unless Replacement of the remote cables required. Repeated removal and installation of the three screws may damage the pistol grip assembly.

2. If replacing remote cable assembly (2), remove three screws (4) securing remote cable switch (5) to pistol grip assembly (6) and remove remote cable assembly.



Maintenance
M320 Disassembly Cont.



3. Using stepped punch and hammer, tap out roll pin (7) and roll pin (8) and remove pistol grip assembly (6) from receiver (3).

4. Engage barrel release lever (9) and pivot barrel (10) to open position.

5. Depress stop pin (11) into receiver (3), allowing barrel (10) to pivot fully open until there is no longer spring tension.

6. Using 5/32 in. punch, push out shouldered pin (12) and remove helical torsion spring (13) and barrel (10) from receiver (3).

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INSPECTION

1. Inspect grenade launcher components for bends, breaks, cracks, and other damage.
2. Inspect barrel for elongated pivot pin holes.

REPAIR OR REPLACEMENT

Replace defective parts as authorized by WP 0025.

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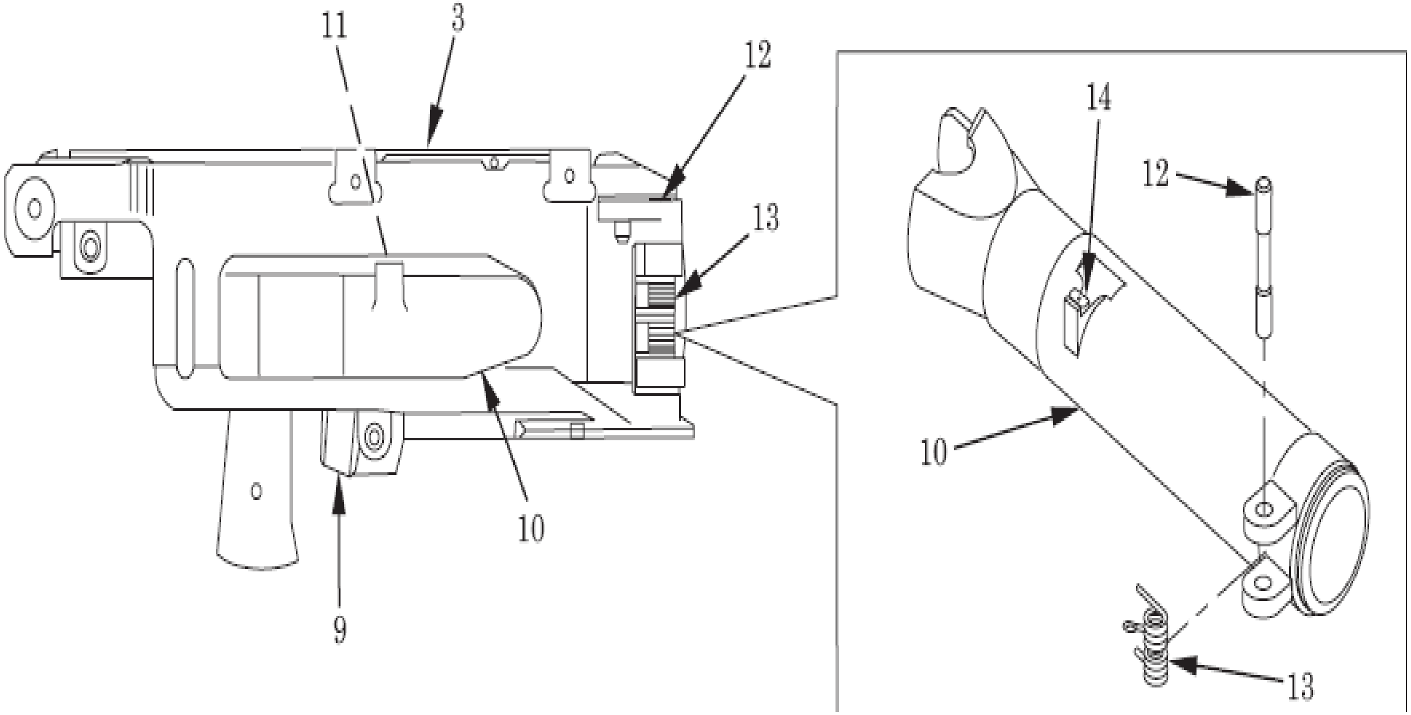
ASSEMBLY



1. Install helical torsion spring (13) between hinges of barrel (10) with central spring legs in position to contact barrel between barrel hinges. Both open spring legs should face receiver (3).

2. Install barrel (10) with helical torsion spring (13) into front of receiver (3), ensuring there is no pressure on spring.

3. Align shouldered pin (12) with hinges of barrel (10), helical torsion spring (13), and receiver (3), and install shouldered pin in receiver. Ensure spring rests in recessed portion of shouldered pin.

ASSEMBLY CONT.

4. Manually pivot barrel (10) into receiver (3) until rubber stop (14) on barrel contacts stop pin (11) on receiver.

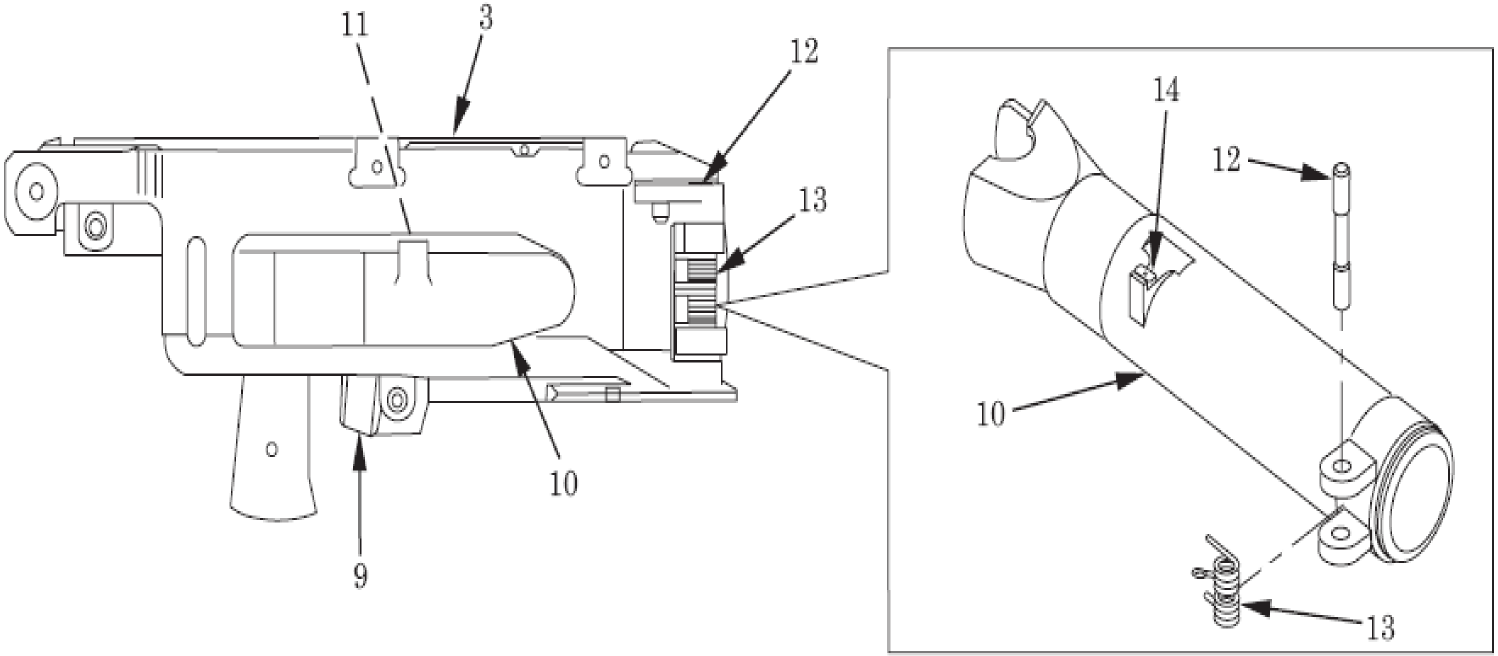
5. Depress stop pin (11) into receiver (3) and pivot barrel (10) into receiver until rubber stop (14) on top of barrel clears depressed stop pin.

6. Release stop pin (11) and push barrel (10) completely into receiver (3). Ensure barrel release lever (9) engages locking slot at bottom of barrel and locks barrel securely into receiver.

7. Open and close barrel (10) several times to check proper operation of barrel release lever (9), helical torsion spring (13), and stop pin (11) with rubber stop (14).

8. Ensure that barrel (10) pivots around shouldered pin (12), properly closes, and properly locks, all without play.

9. Check that barrel (10) automatically pivots outward from receiver (3) when barrel release lever (9) is pushed.



10. With hammer in forward position, slide pistol grip assembly (6) over barrel release lever (9) and trigger (15) onto receiver (3). Ensure that hammer is in forward position.

11. Align holes in pistol grip assembly (6) with holes in receiver (3) and install roll pin (8), then install roll pin (7) using stepped punch, centering pins within receiver.

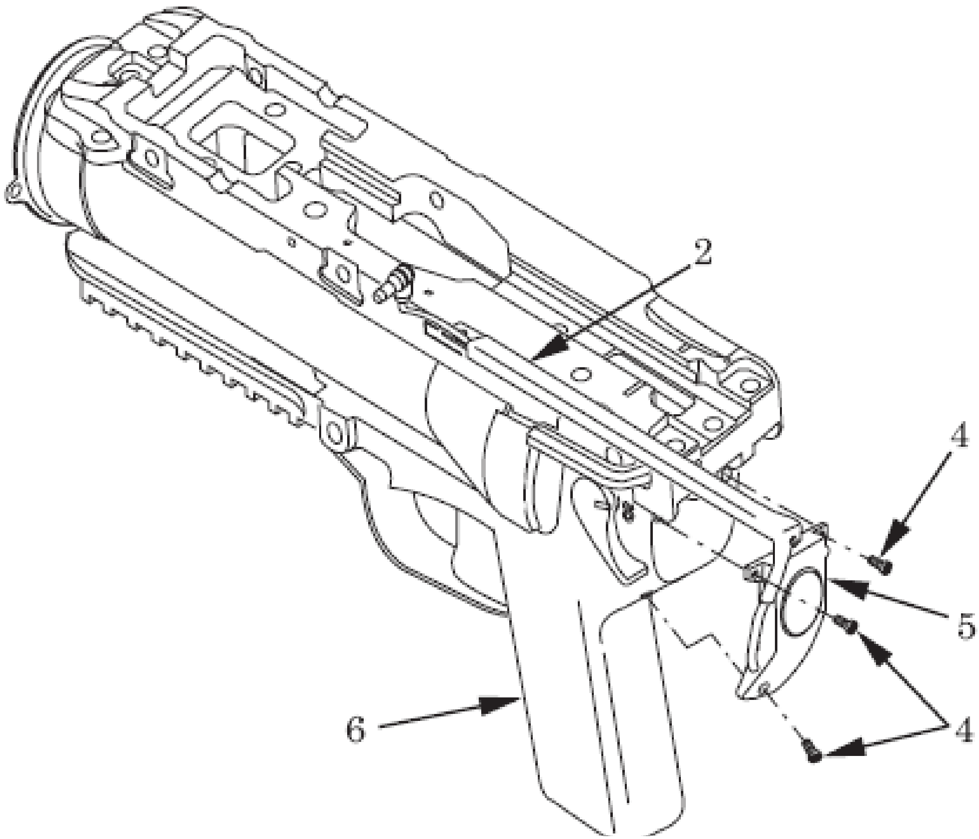
12. Conduct function check. Pistol grip assembly (6) should fit snugly to receiver (3) and trigger (15); barrel release lever (9), and selector lever (16) should function smoothly.

ASSEMBLY CONT.

CAUTION

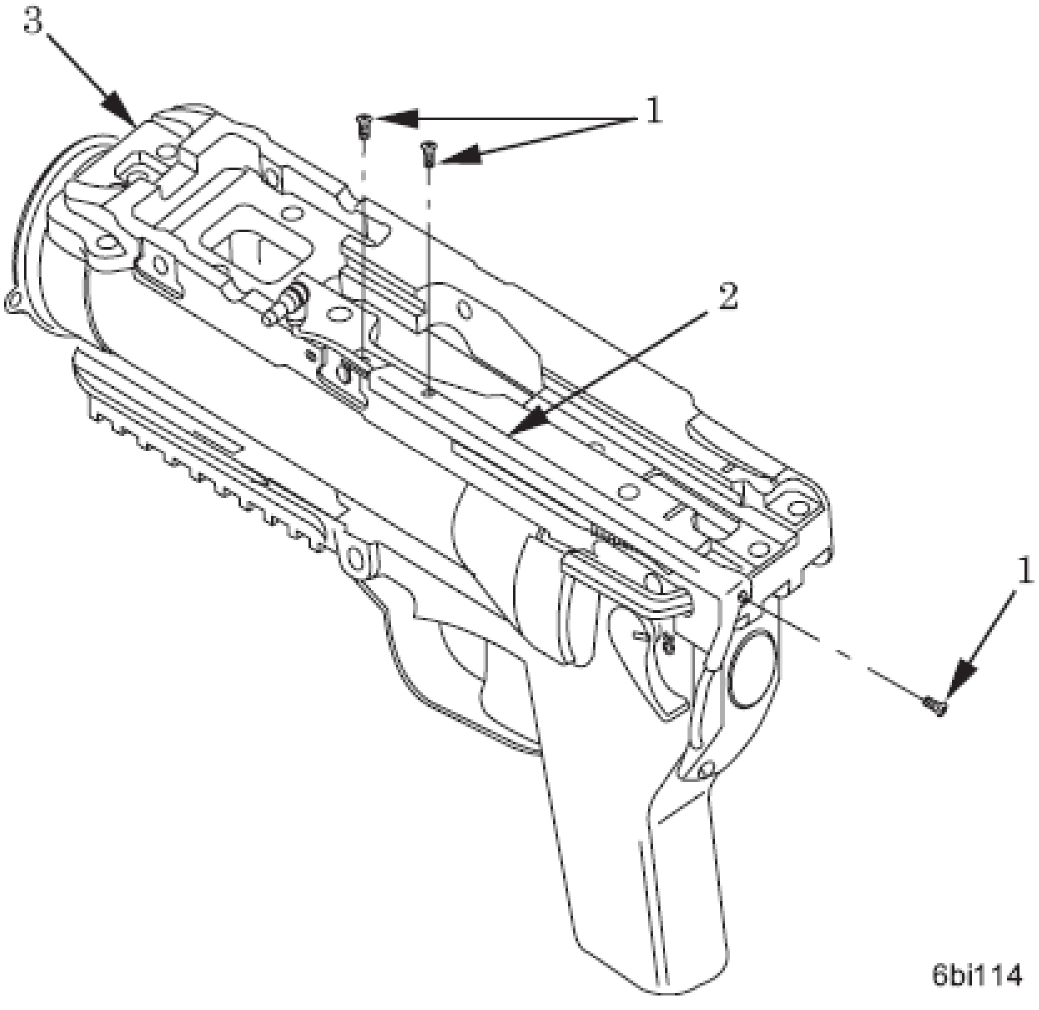
If remote cable assembly was removed use care when installing and tightening the three remote cable switch screws to prevent damage to the pistol grip assembly. Repeated removal and installation of the three remote cable switch screws may damage the pistol grip assembly.

13. If remote cable assembly (2) was removed, position remote cable switch (5) on pistol grip assembly (6) and install three screws (4).



ASSEMBLY CONT.

14. Position remote cable assembly (2) on receiver (3) and install three screws (1).



DISASSEMBLY

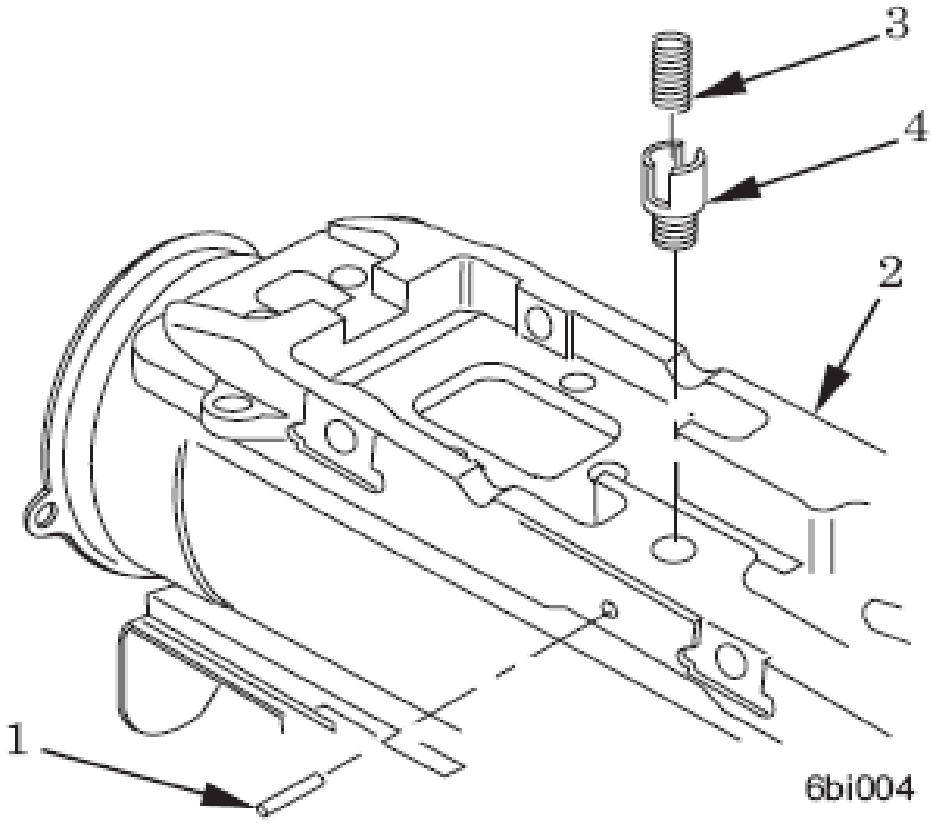
Remove barrel, DNS, and DNS mounting bracket and pistol grip from receiver.

NOTE

Use care when removing headless straight pin to avoid loss of parts. Ensure that barrel is locked into receiver.

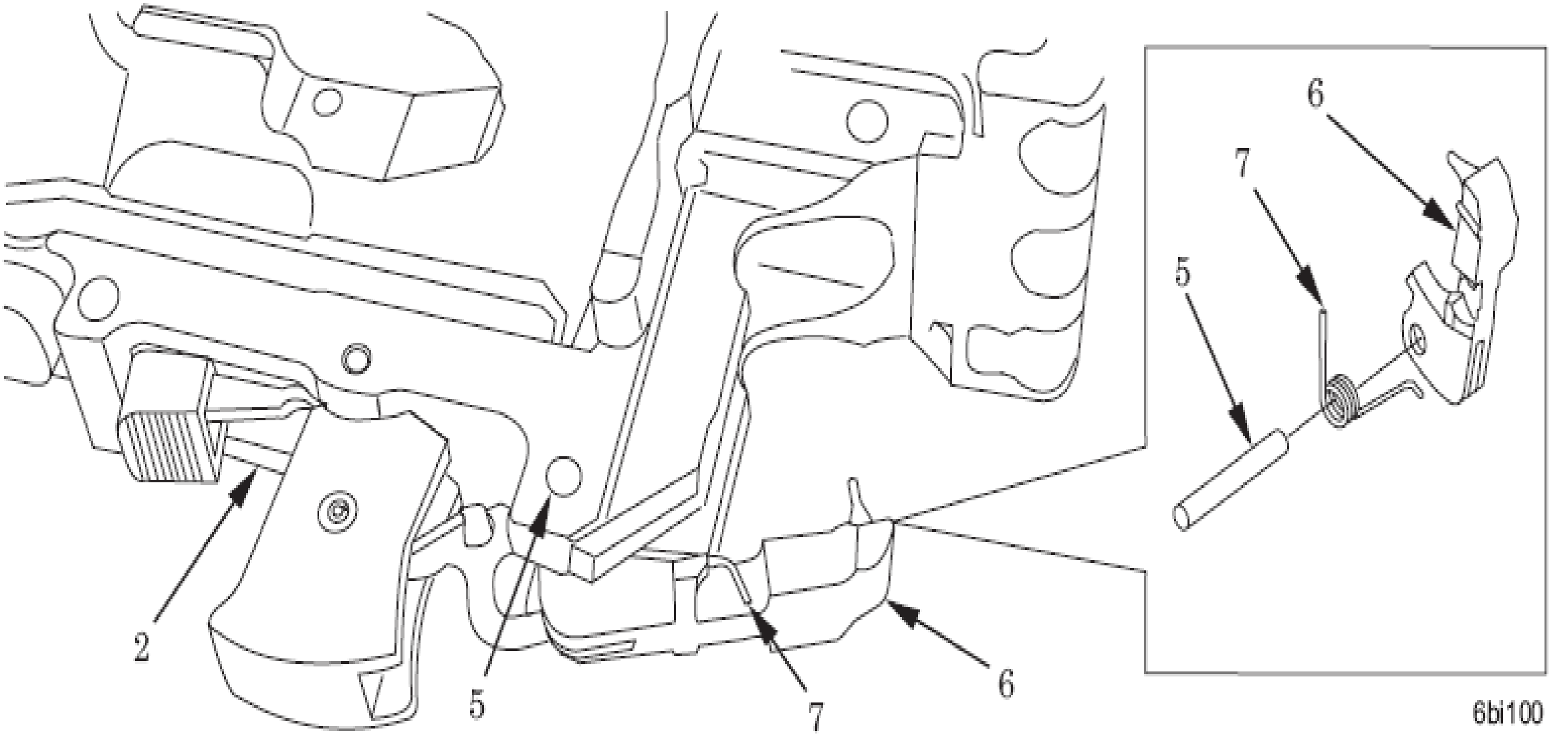
1. Using 1/16 in. punch, remove headless straight pin (1) from receiver (2). Drive straight pin into receiver.

2. Remove helical compression spring (3) and stop pin (4) from borehole in receiver (2).

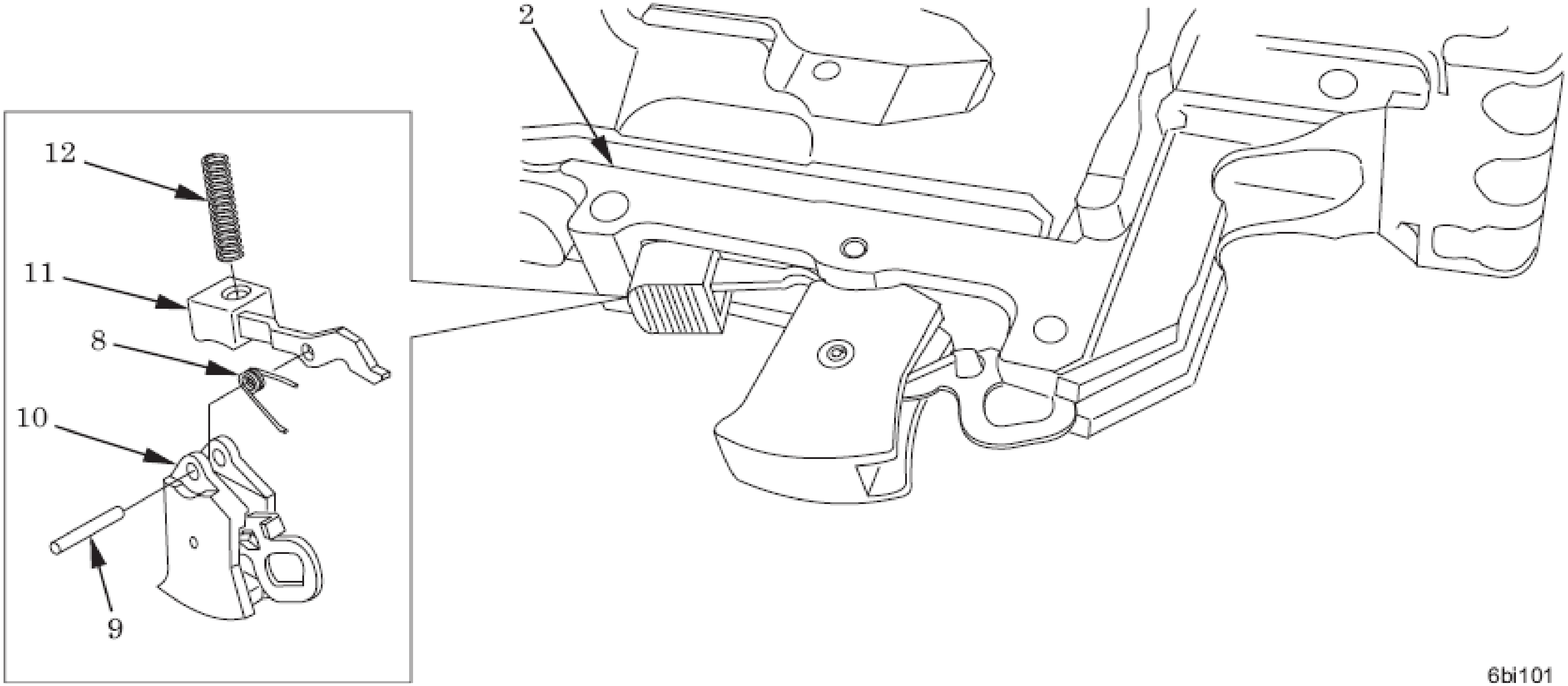


DISASSEMBLY CONT.

3. Using 3/16 in. punch, remove straight pin (5), hammer (6), and torsion spring (7) from receiver (2).



DISASSEMBLY CONT.



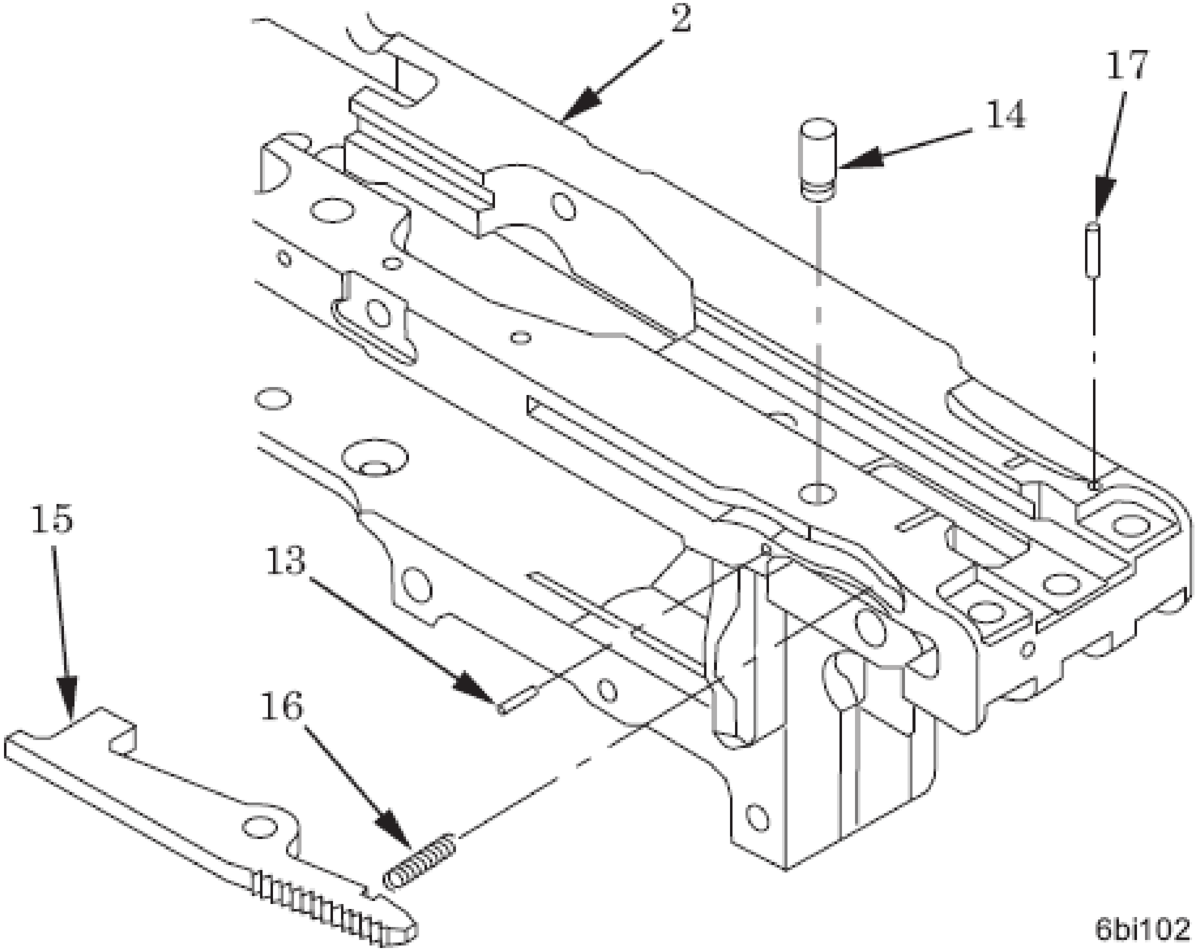
4. Unhook torsion spring (8) to relieve tension. Using 3/16 in. punch, remove straight pin (9), trigger assembly (10), torsion spring, barrel release lever (11), and helical compression spring (12) from receiver (2).

DISASSEMBLY CONT.

5. Using 1/16 in. punch, drive headless straight pin (13) into center of receiver (2) and remove.

6. Push out pin (14) from underneath with 1/16 in. punch and remove buttstock release (15) and spring (16) from receiver (2).

7. If straight pin (17) does not retain stowed hex key wrench, remove straight pin from receiver (2). Discard straight pin.



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INSPECTION

1. Inspect receiver assembly.

2. Inspect trigger assembly for bent or broken components.

3. Inspect all components for bends, breaks, cracks, and other damage.

REPAIR OR REPLACEMENT

1. Replace defective receiver parts as authorized by WP 0025 in the TM.

2. If trigger assembly repair is required, see WP 0010 in the TM.

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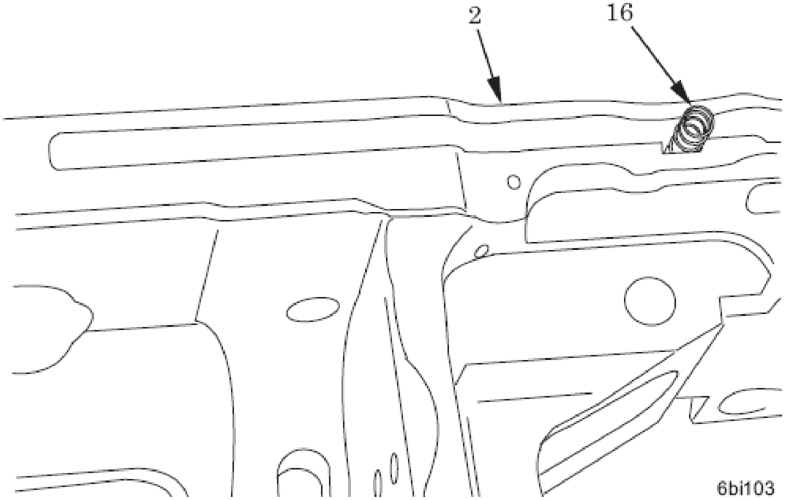
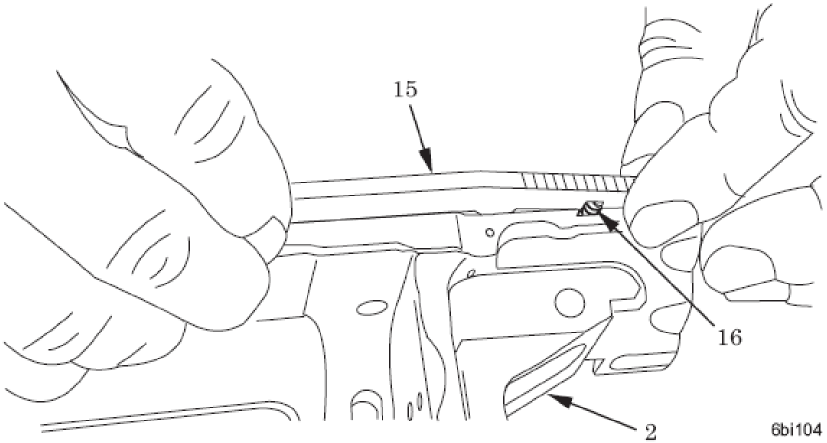
ASSEMBLY

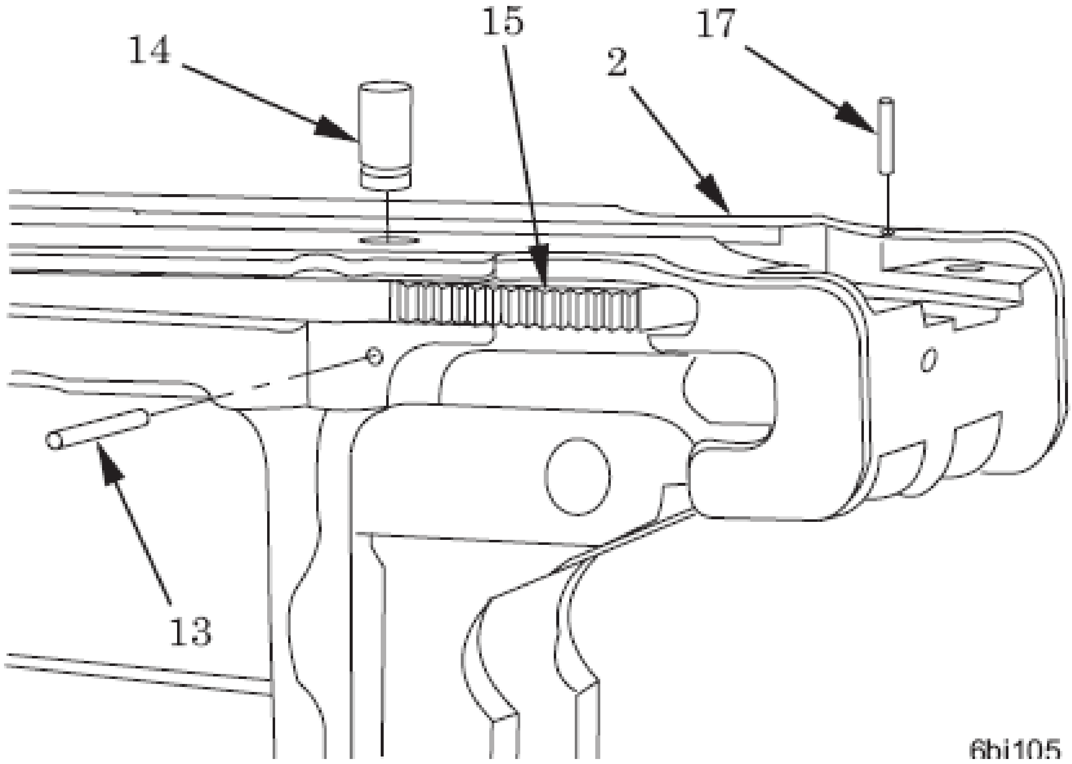


1. Position spring (16) in hole in receiver (2).



2. Position buttstock release (15) in slot of receiver (2) so that spring (16) is aligned in notch of buttstock release.

ASSEMBLY CONT.

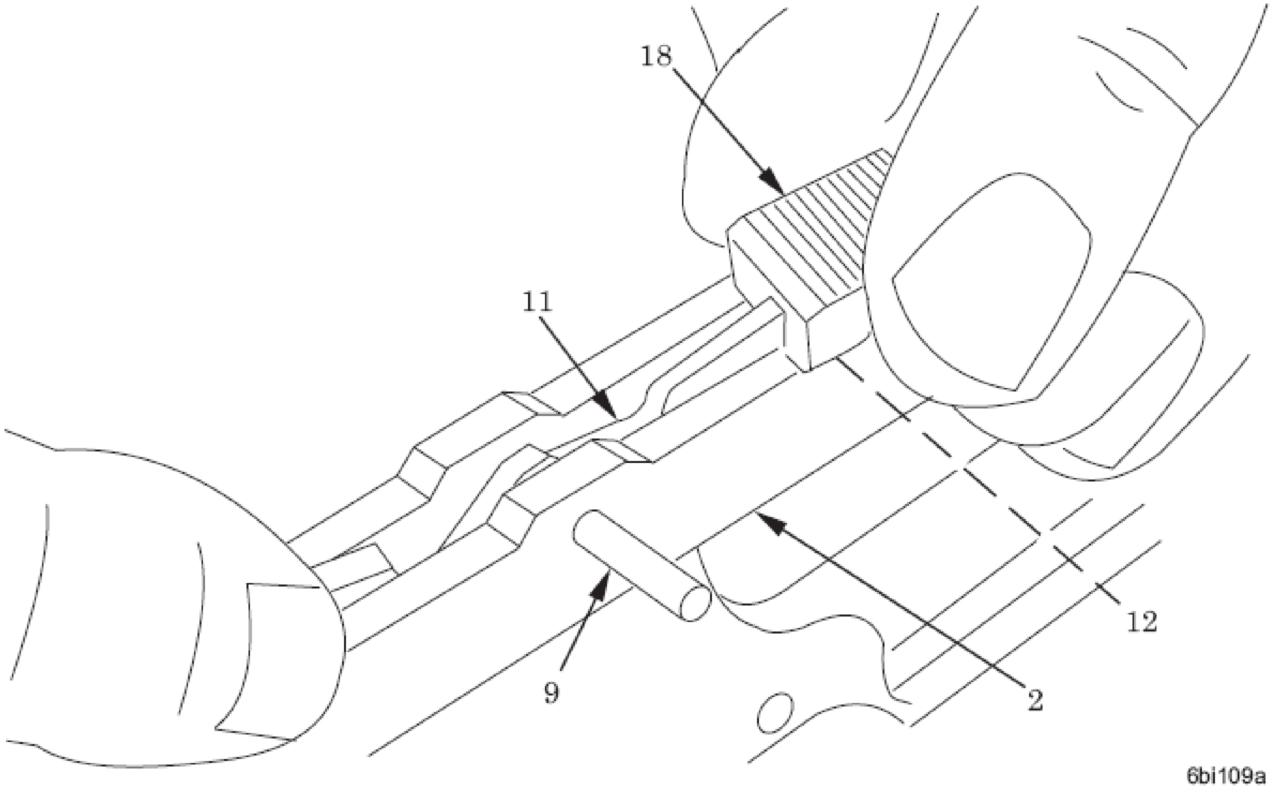


3. Install pin (14), grooved end first, to secure buttstock release (15) in receiver (2). Ensure that end of pin is flush with top of receiver.

4. Install headless straight pin (13) to secure pin (14). Ensure that headless straight pin is flush with outside of receiver (2).

5. If removed, install new straight pin (17) (WP 0025) to receiver (2).

ASSEMBLY CONT.

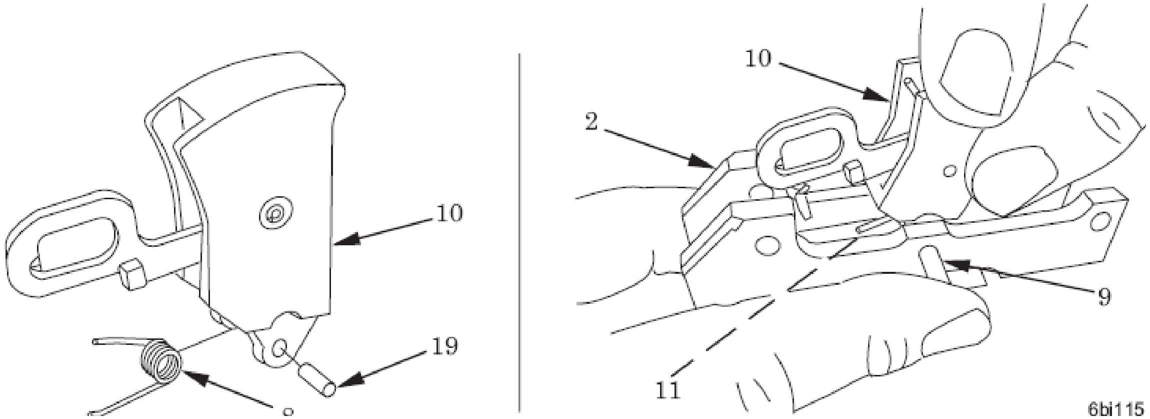


6. Place barrel release lever spring (12) into forward area of trigger cavity in receiver (2).

7. Place back of barrel release lever (11) into slot located on right side of trigger cavity of receiver (2) with spring positioning hole, located under barrel release (18), aligned with barrel release lever spring (12).

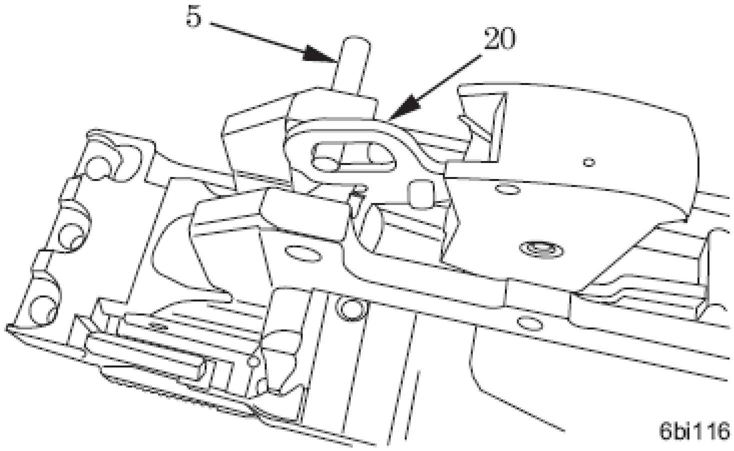
8. Insert smaller straight pin (9) through receiver (2) into barrel release lever (11) just far enough to hold but not extend past inside edge of barrel release lever.

ASSEMBLY CONT.



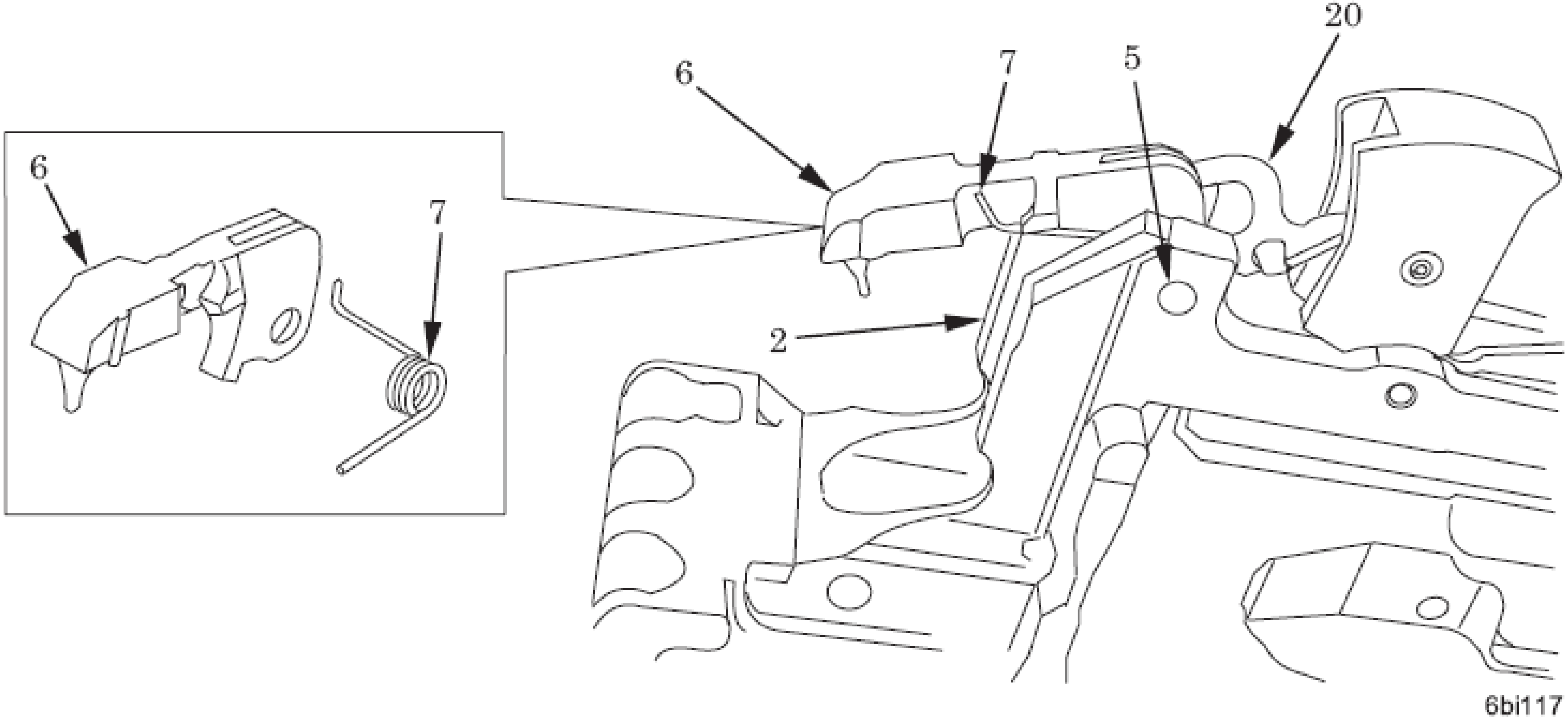
9. Install torsion spring (8) in recess at rear of trigger assembly (10) and secure with trigger slave pin (19) (WP 0026).

10. Place trigger assembly (10) in trigger cavity of receiver (2). Continue installing smaller straight pin (9) through barrel release lever (11) and into trigger assembly, pushing slave pin (19) completely out of trigger assembly and receiver.



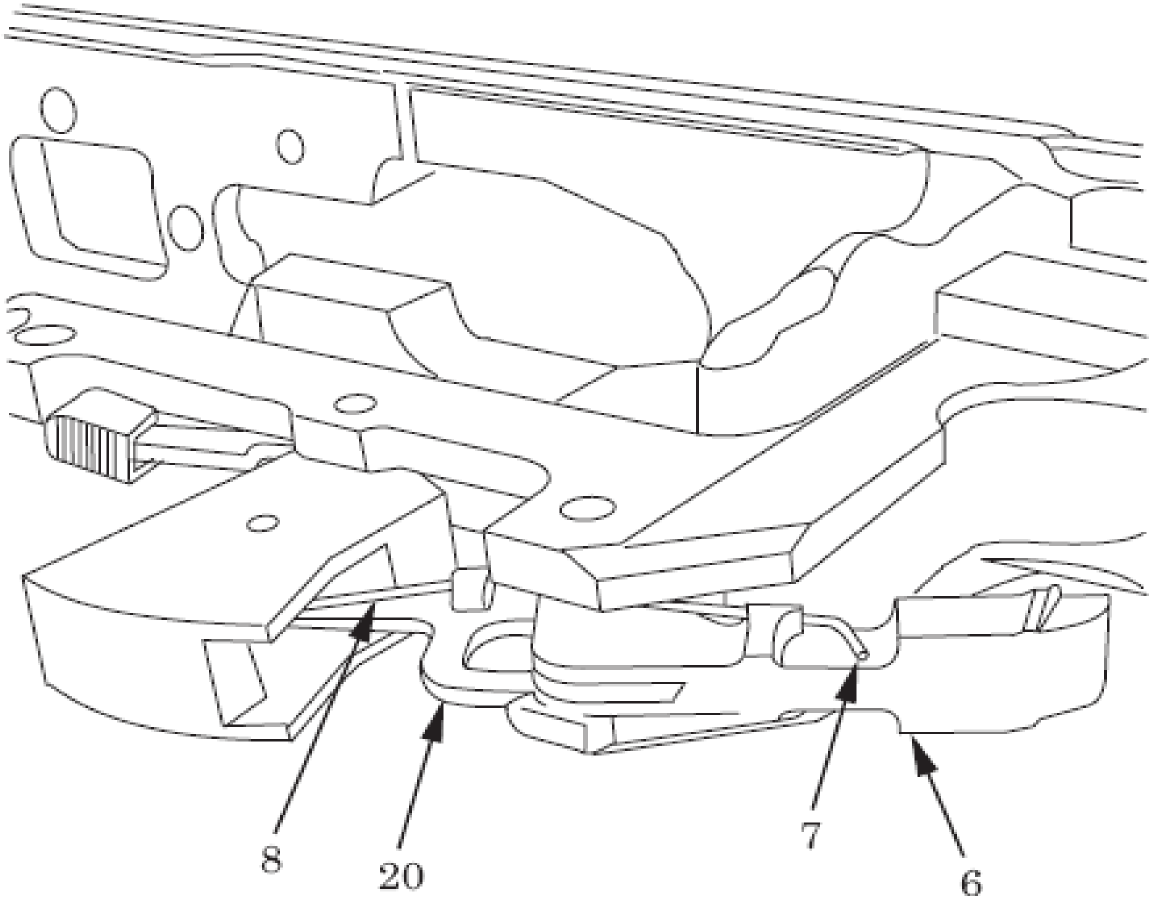
11. Push trigger bar (20) rearward and capture trigger bar by partially installing larger straight pin (5).

ASSEMBLY CONT.



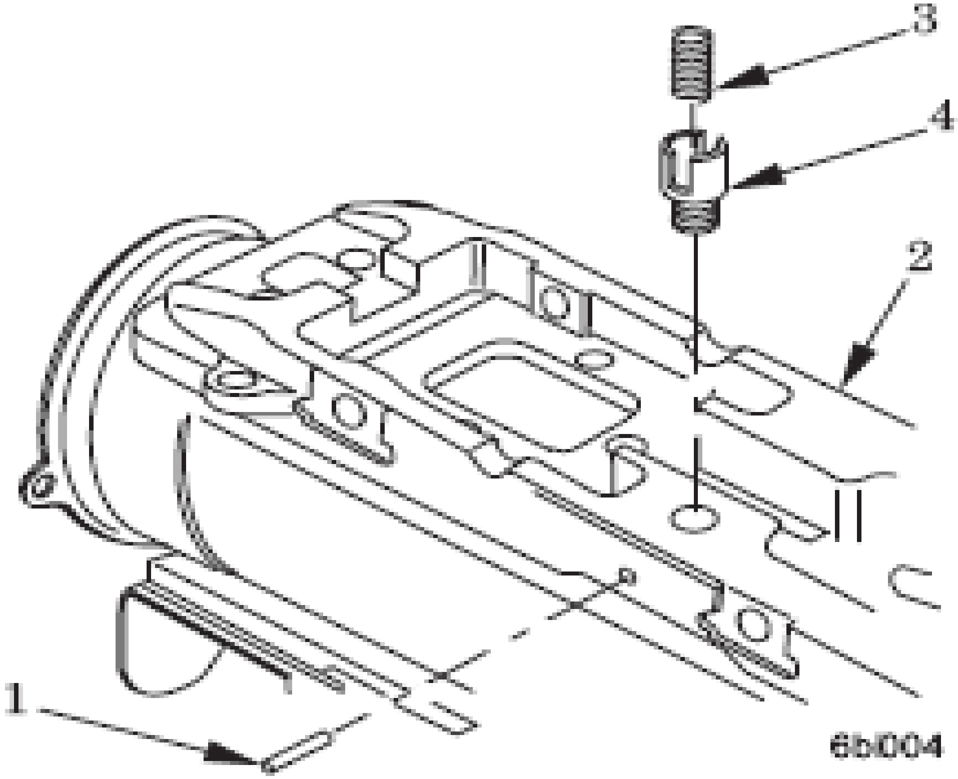
12. Install hammer (6), with firing pin facing downward and toward chamber of receiver (2), and torsion spring (7) with hook upwards and secure with straight pin (5). Trigger bar (20) should be captured.

ASSEMBLY CONT.



13. Position bent leg of torsion spring (7) on notched opening on hammer (6) and long end of torsion spring (8) on notched opening on trigger bar (20).

ASSEMBLY CONT.



14. Ensure that barrel is closed into receiver (2).

15. Align headless straight pin (1) in receiver (2) and begin installation.

16. Install stop pin (4) into borehole in receiver and place helical compression spring (3) into stop pin. Ensure slots in stop pin are aligned with holes.

17. Compress helical compression spring (3) with screwdriver and install headless straight pin (1) using hammer and 1/16 in. punch until pin is positioned in both side holes of receiver (2) and secures spring.

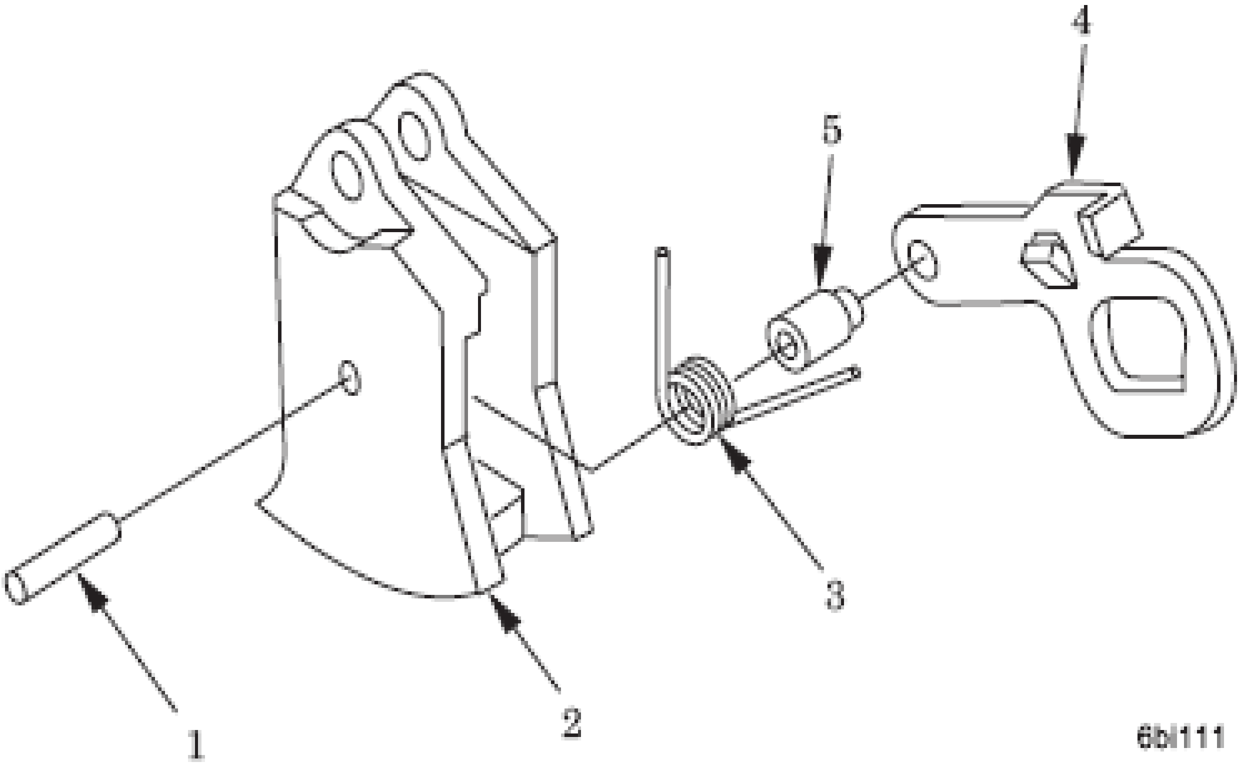
TRIGGER ASSEMBLY MAINTENANCE DISASSEMBLY

Remove trigger assembly

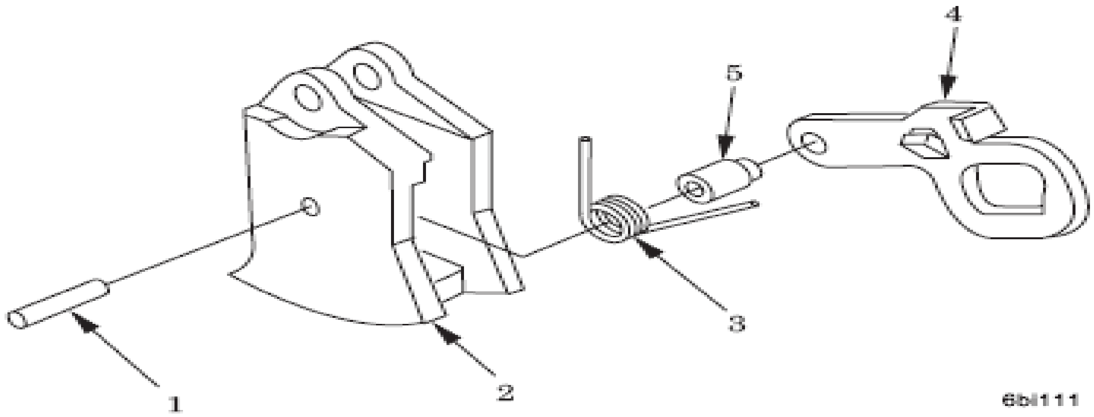
1. Using 3/32 in. punch, drive out headless straight pin (1) and remove internal parts from trigger housing (2).

2. Disengage end of trigger bar spring (3) from notched opening of trigger bar (4).

3. Remove trigger bar spring (3) and trigger bar bearing (5) from trigger bar (4).



TRIGGER ASSEMBLY MAINTENANCE
REASSEMBLY



1. Insert recessed side of trigger bar bearing (5) into hole of trigger bar (4).

2. Install trigger bar spring (3) onto trigger bar bearing (5) with long end of spring engaging notched opening of trigger bar (4).

3. Insert assembled trigger bar (4) into rear of trigger housing (2). Position short leg of trigger bar spring (3) toward top of trigger housing.

4. Start installation of headless straight pin (1) into side of trigger housing (2).

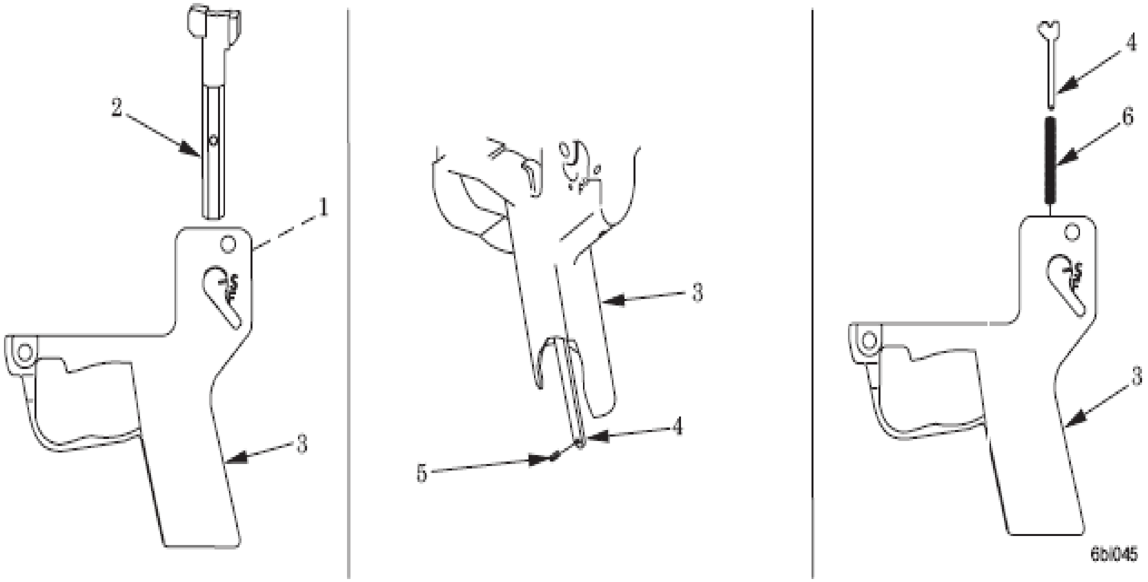
5. Align trigger bar bearing (5) with hole in side of trigger housing (2) and drive in headless straight pin (1).

6. Ensure that long end of trigger bar spring (3) is engaged in notched opening of trigger bar (4).

7. After trigger assembly is installed in receiver assembly and pistol grip assembly is installed on receiver assembly, perform trigger pull test (WP 0021).

PISTOL GRIP ASSEMBLY MAINTENANCE
DISASSEMBLY

-Remove pistol grip assembly from receiver.



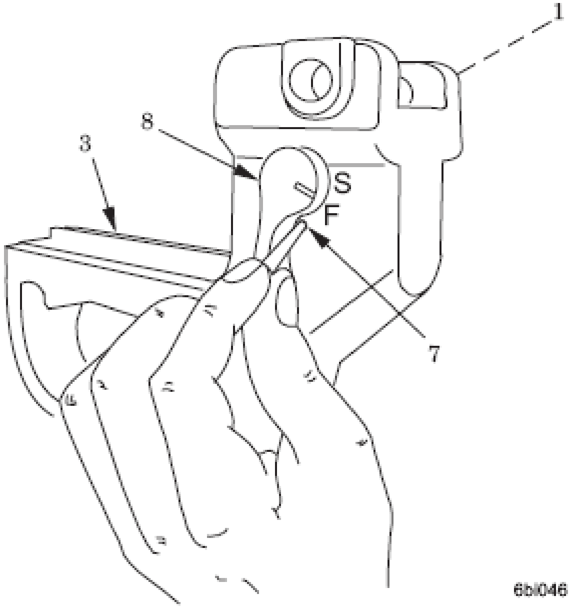
1. Move selector lever (1) to "S" (safe).

2. Insert hammer strut tool (2) into topside of pistol grip (3) and push downward on tool. While maintaining downward pressure, move tool rearward so that locking surface on back rear of tool is allowed to engage underside of selector levers. Bottom of hammer strut (4) should protrude from bottom of pistol grip.

3. Using 1/16 in. pin punch, tap out spring pin (5). Discard spring pin.

4. Remove hammer strut tool (2), hammer strut (4), and helical compression spring (6) from pistol grip (3).

PISTOL GRIP ASSEMBLY MAINTENANCE
DISASSEMBLY



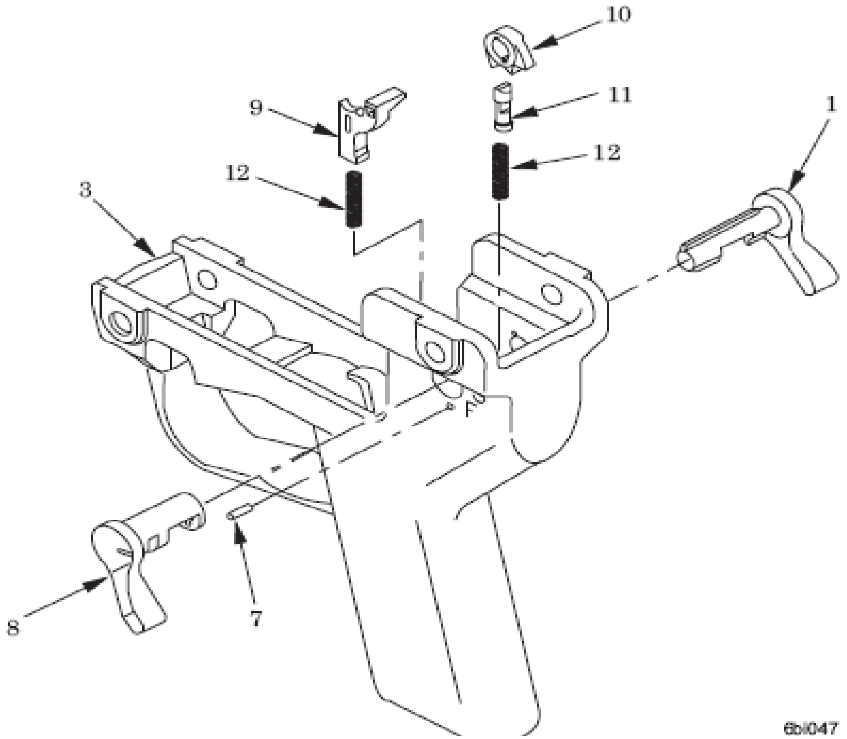
NOTE

When selector lever is disassembled for repair, ensure two new helical compression springs are included for reassembly.

6. Insert assembling pins (7) (WP 0026) into assembling pin holes underneath right side selector lever (1) and left side selector lever (8). Make sure pins are flush with right and left outer surfaces of pistol grip (3).
Turn selector lever (8) back to "S" (safe) position.

7. Turn selector lever (8) back to "S" (safe) position.

PISTOL GRIP ASSEMBLY MAINTENANCE DISASSEMBLY



8. Push selector lever catch (9) downward and remove left side selector lever (8).

9. Push selector lever catch (9) downward and slide selector lever index (10) from right side selector lever (1).

10. Move right side selector lever (1) to "S" (safe) position, push downward on selector lever catch (9), and remove right side selector lever and selector lever index (10).

11. Remove assembling pins (7) using a 1.5 mm punch and remove selector lever catch (9), selector lever pin (11), and two helical compression springs (12). Discard two helical compression springs.

M320
GRENADE LAUNCHER

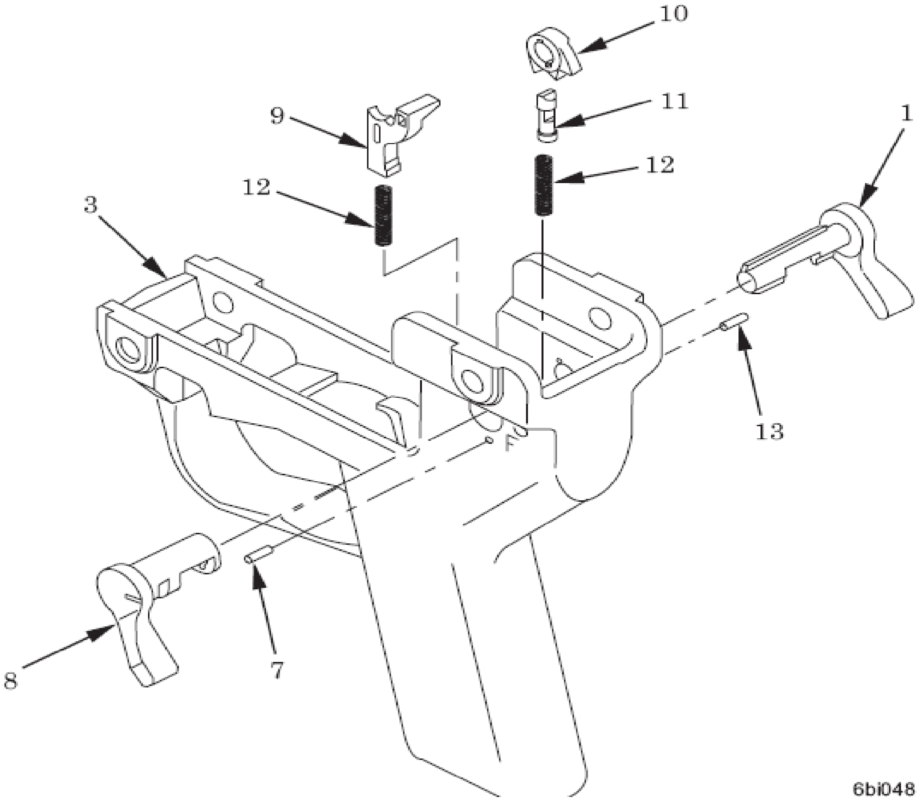
INSPECTION

Inspect all components for burrs, bends, breaks, cracks, and other damage.

REPAIR OR REPLACEMENT

Replace defective parts as authorized by WP 0025.

PISTOL GRIP ASSEMBLY MAINTENANCE REASSEMBLY



1. Install two new helical compression springs (12) (WP 0025) into pistol grip (3).

2. Install selector lever catch (9) on left side of pistol grip (3) and install assembling pin (7) to retain selector lever catch.

3. Install selector lever pin (11) on right side, with recessed portion of pin to rear; install pin into its bearing and insert assembling pin (13).

4. Install right side selector lever (1) from right side into its bearing with selector lever on "S" (safe) position.

PISTOL GRIP ASSEMBLY MAINTENANCE
REASSEMBLY

5. Slide selector lever index (10) onto right side selector lever (1).

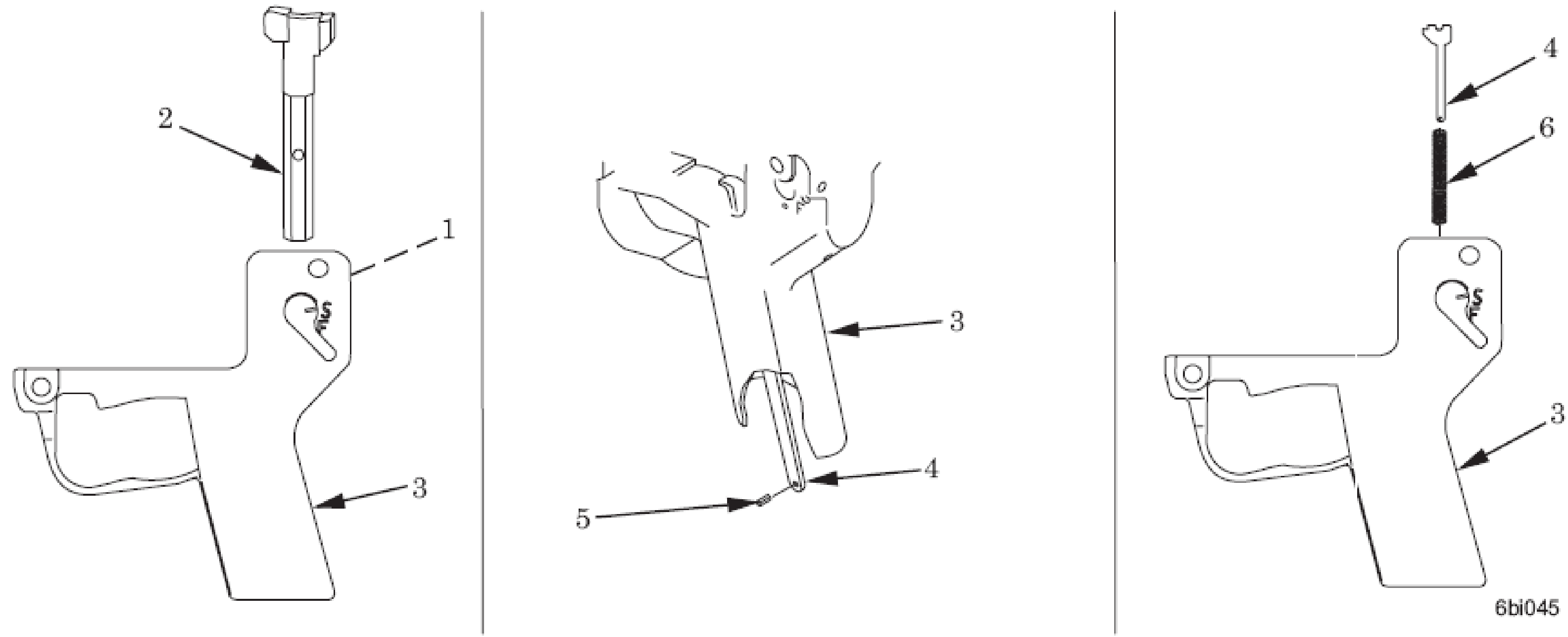
6. Hold selector lever index (10) against inner wall of pistol grip (3) and seat right side selector lever (1) into grip by simultaneously pushing down on selector lever catch (9) while ensuring selector lever index remains against inner wall of grip.

7. Hold right side selector lever (1) in place, press down on selector lever catch (9), and install left side elector lever (8) all the way into pistol grip (3). Ensure that both left and right side selector levers are n "S" (safe) position.

8. Using a 1/16 in. punch, remove assembling pins (7 and 13) from holes underneath left and right elector levers.

9. Check function of left and right selector levers (1 and 8) by moving levers from "S" (safe) to "F" (fire) and back again. Selector levers must be firmly retained on pistol grip (3) and must click into both positions.

PISTOL GRIP ASSEMBLY MAINTENANCE
REASSEMBLY



10. With selector lever on "S" (safe), position helical compression spring (6) and hammer strut (4) into pistol grip (3) and insert hammer strut tool (2) onto hammer strut and helical compression spring.

11. Push downward on tool and move tool rearward so that locking surface on back rear of tool is allowed to engage underside of selector levers (1 and 8). Bottom of hammer strut (4) should protrude from bottom f pistol grip (3).

12. Install new spring pin (5) (WP 0025) into hammer strut (4) until spring pin is centered in hammer strut.

13. Remove hammer strut tool (2) from pistol grip (3).

MAINTENANCE

VERTICAL GRIP ASSEMBLY

DISASSEMBLY

NOTE

Do not remove bracket if not cracked, bent, or damaged. Proceed to DISASSEMBLY.

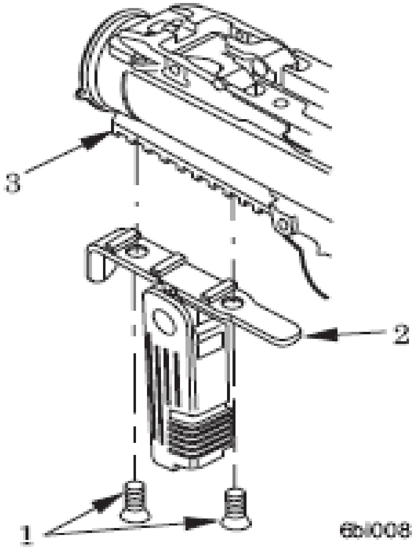


Figure 1. Removal of Vertical Grip Assembly.

If replacing bracket, remove two socket head capscrews (1) and vertical grip assembly (2) from rail on receiver (3).

MAINTENANCE
VERTICAL GRIP ASSEMBLY
DISASSEMBLY

WARNING

To avoid injury to eyes, use care when removing and installing spring loaded parts.

MAINTENANCE
VERTICAL GRIP ASSEMBLY
DISASSEMBLY

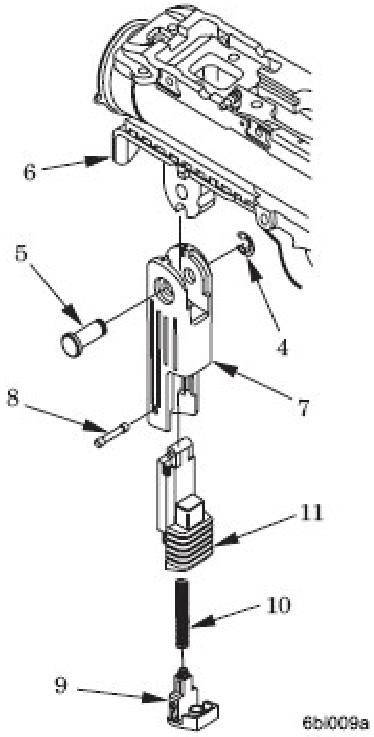


Figure 2. Disassembly of Vertical Grip Assembly.

1. Remove and discard retaining clip (4).

2. Remove bolt (5) from bracket (6) and grip (7).

3. Remove retaining pin (8) from grip (7).

4. Remove insert (9), helical compression spring (10), and slide (11) from grip (7).

MAINTENANCE VERTICAL GRIP ASSEMBLY DISASSEMBLY

INSPECTION

-Inspect components for bends, breaks, cracks, and other damage.

REPAIR OR REPLACEMENT

Replace defective parts as authorized by WP 0025 in the TM 9-1010-232-23&P.

MAINTENANCE
VERTICAL GRIP ASSEMBLY
REASSEMBLY

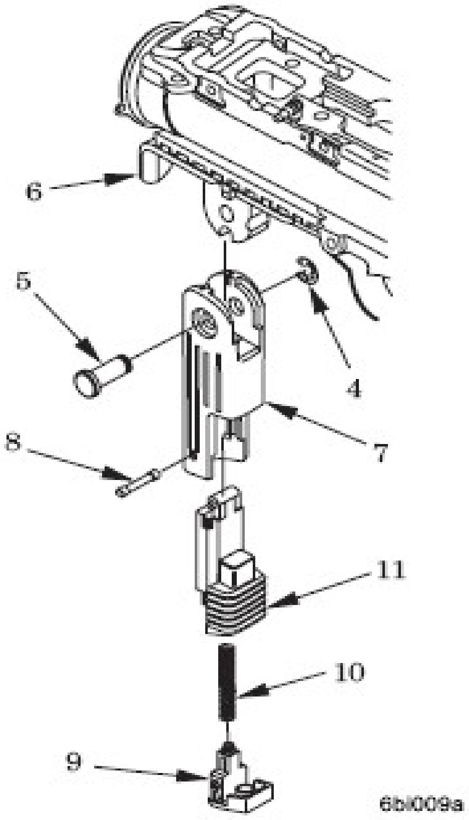


Figure 3. Assembly of Vertical Grip Assembly.

1. Install helical compression spring (10) onto insert (9) so spring seats properly.

2. Install helical compression spring (10) and insert (9), and slide (11) into grip (7). Align holes in bottom of grip with holes in insert and install retaining pin (8).

MAINTENANCE
VERTICAL GRIP ASSEMBLY
REASSEMBLY

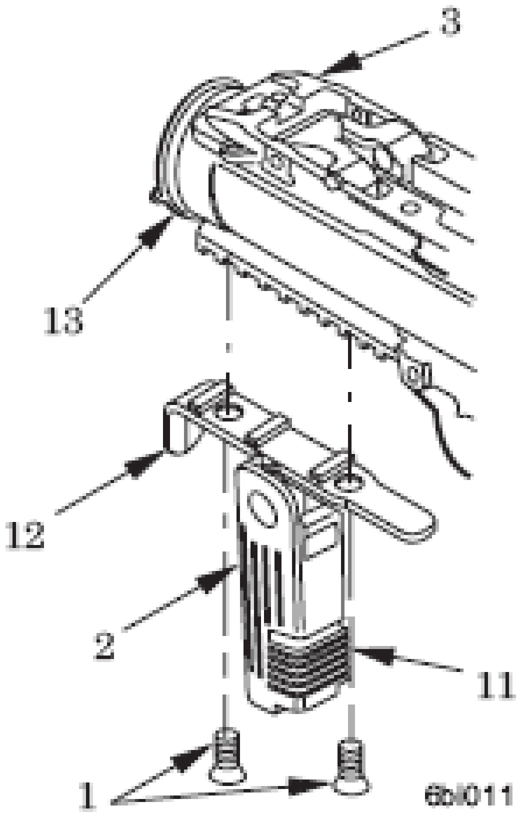


Figure 4. Installation of Vertical Grip Assembly.

3. Align holes in grip (7) with hole in bracket (6).

4. Install bolt (5) and secure with new retaining clip (4) (WP 0025) in the TM 9-1010-232-23&P.

MAINTENANCE
VERTICAL GRIP ASSEMBLY
REASSEMBLY

1. With finger stop (12) toward muzzle of barrel (13), install vertical grip assembly (2) on rail of receiver (3) and tightly secure with two socket head capscrews (1).

CAUTION

Always pull downward on slide (11) before folding vertical grip assembly. Failure to do so may result in damage to equipment.

2. Pull down on slide (11) and fold up vertical grip assembly (2).

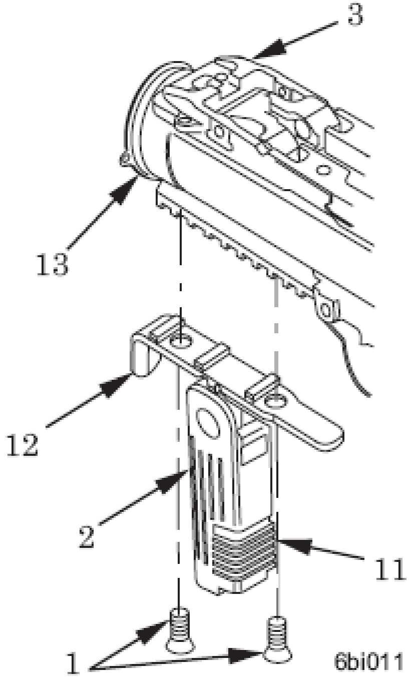


Figure 4. Installation of Vertical Grip Assembly.

MAINTENANCE
BARREL ASSEMBLY
DISASSEMBLY

Remove mounting adapters from barrel assembly

1. Pivot barrel all the way open (WP 0009) TM 9-101-232-10.
2. Remove muzzle cap (1) from barrel (2).
3. Press barrel release (3) and pivot barrel (2) to halfway open position to visually inspect rubber stop (4).

NOTE

Perform step 4 only if rubber stop is damaged.

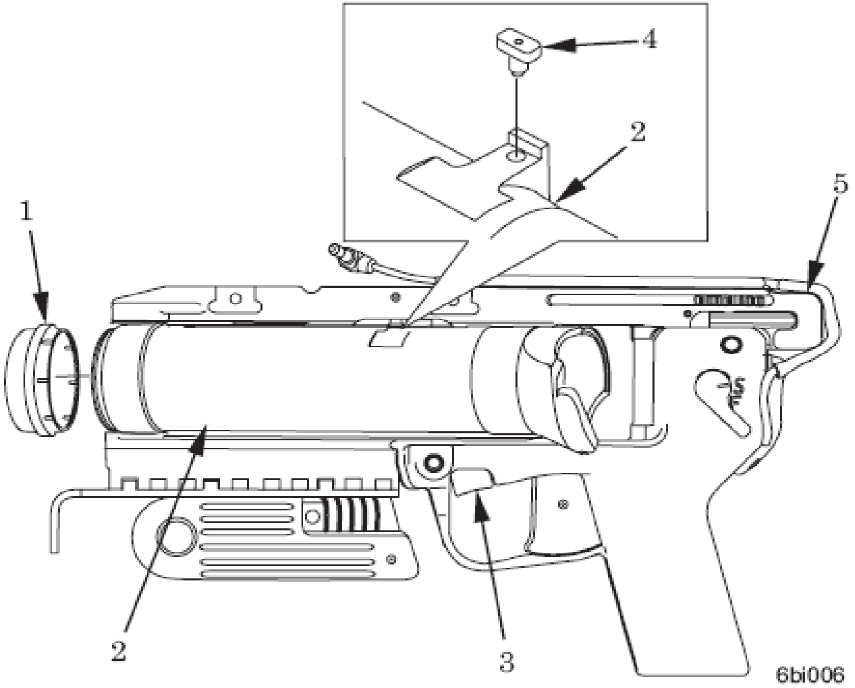


Figure 1. Removal/Installation of Muzzle Cap and Rubber Stop.

MAINTENANCE
BARREL ASSEMBLY
DISASSEMBLY

NOTE

Perform step 5 only if rubber pin is damaged.

5. If damaged, remove rubber pin (6) from barrel (2) using jeweler's screwdriver. Discard rubber pin.

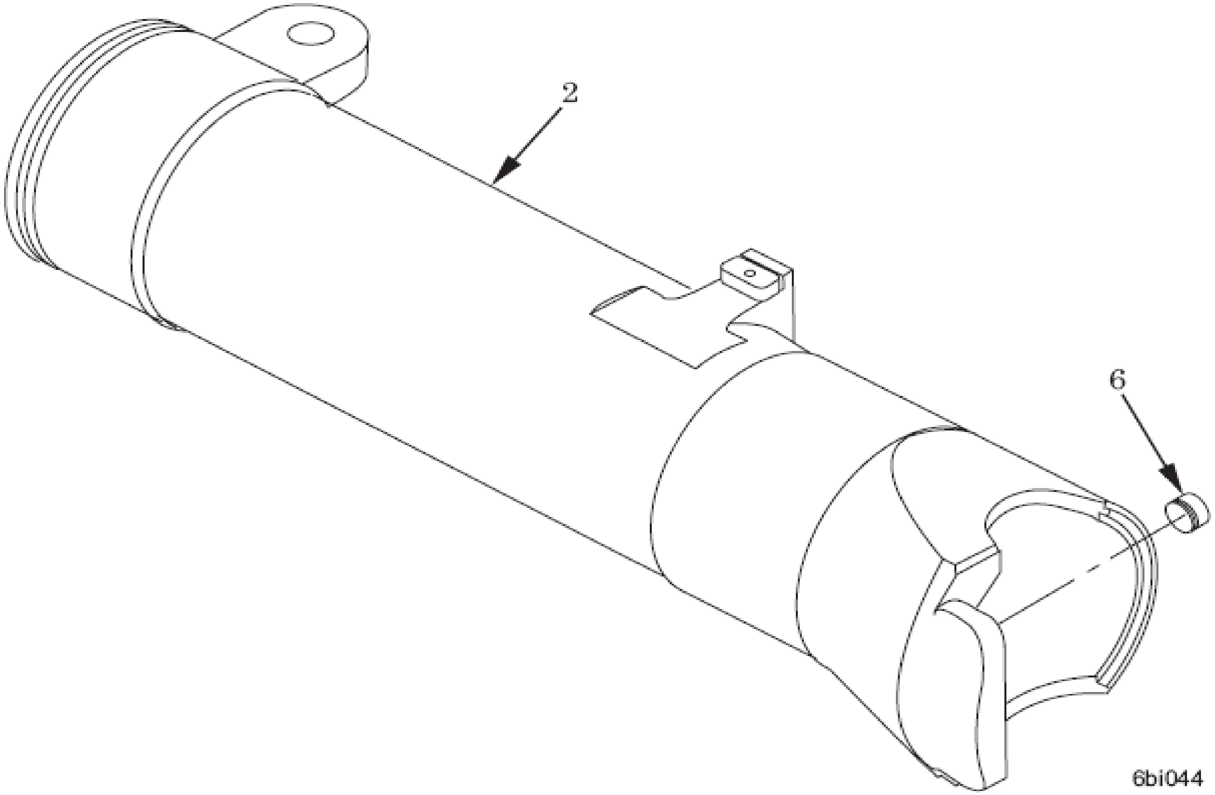


Figure 2. Removal/Installation of Rubber Pin.

MAINTENANCE
BARREL ASSEMBLY

INSPECTION

1. Inspect rubber stop for damage and deterioration.

2. Inspect rubber pin for damage and deterioration.

3. Inspect barrel assembly

REPAIR OR REPLACEMENT

Replace defective parts as authorized by WP 0025 in the TM 9-1010-232-23&P.

MAINTENANCE
BARREL ASSEMBLY
REASSEMBLY

NOTE

If rubber pin is removed, perform step 1.

1. If removed, install new rubber pin (6) (WP 0025) with shouldered end in hole. Press by hand until rubber pin pops into place.

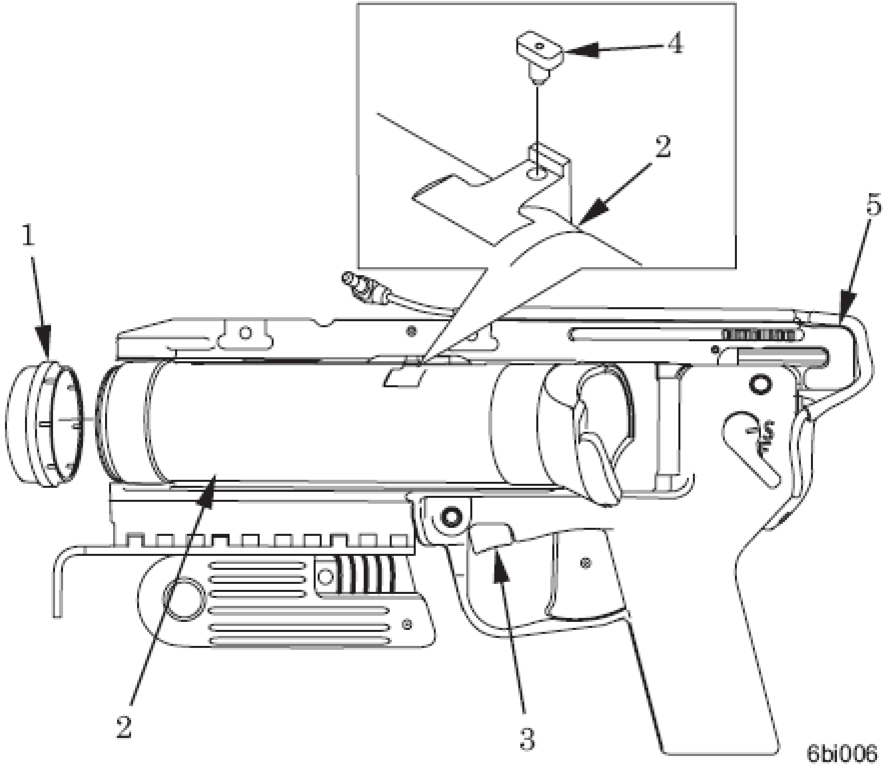


Figure 1. Removal/Installation of Muzzle Cap and Rubber Stop.

MAINTENANCE
BARREL ASSEMBLY
REASSEMBLY

NOTE

If rubber stop is removed, perform steps 2 and 3.

2. If removed, press new rubber stop (4) (WP 0025) into hole in barrel (2).

3. Pivot barrel (2) completely into receiver (5).

4. Install muzzle cap (1) onto barrel (2).

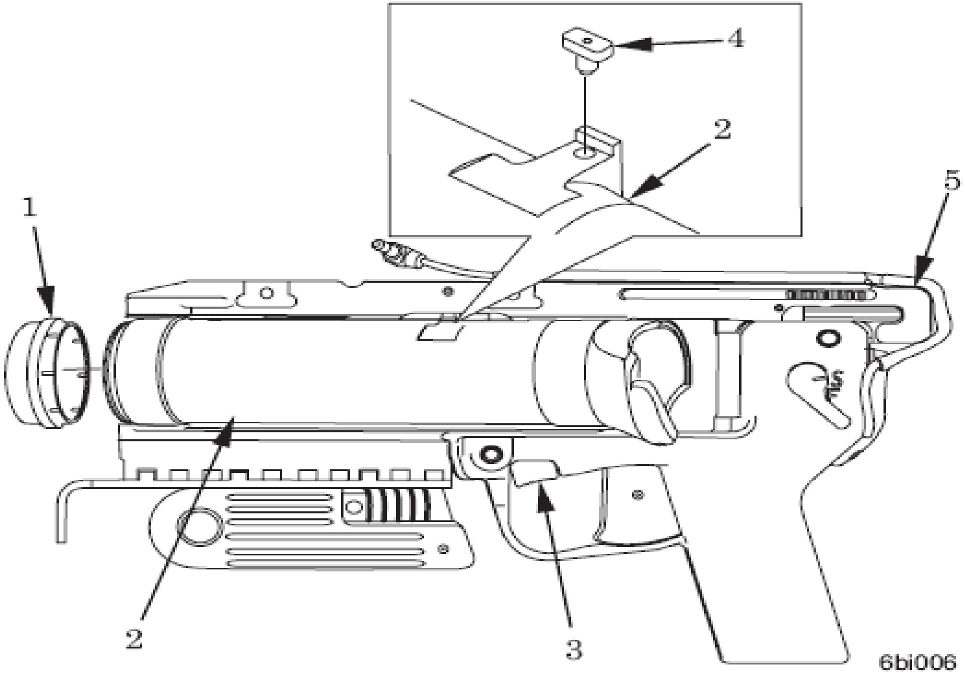


Figure 1. Removal/Installation of Muzzle Cap and Rubber Stop.

MAINTENANCE BARREL ASSEMBLY REASSEMBLY

TEST AND INSPECTION

1. Ensure barrel is clean prior to bore constriction inspection. Clean barrel if necessary (TM 9-1010-232-10).
2. Perform annual gagging barrel bore check (see WP 0021).

MAINTENANCE
LEAF SIGHT ASSEMBLY MAINTENANCE
DISASSEMBLY

MATERIALS/PARTS

Retaining clip (WP0025 FIGURE 7 ITEM 13)
Retaining ring (2) (WP0025 FIGURE 7 ITEM 5)

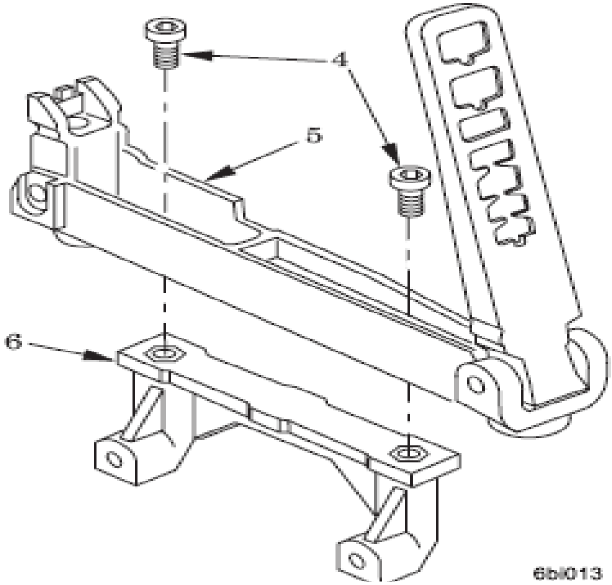
WARNING

To avoid injury to eyes, use care when removing and installing spring-loaded parts.

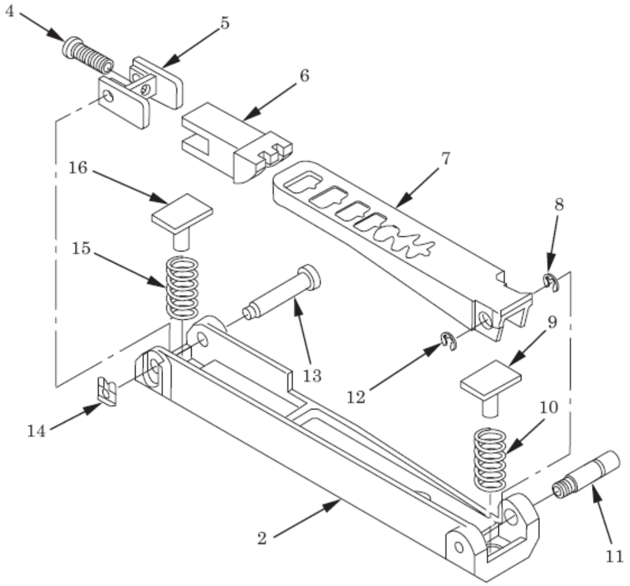
MAINTENANCE
LEAF SIGHT ASSEMBLY MAINTENANCE
DISASSEMBLY

REMOVAL:

1. Remove two screws (4) and remove sight support assembly (5) from sight base (6) using 3mm end of stowed hexagon key wrench.



DISASSEMBLY (cont)



Remove retaining clip(14)by lifting clip at its outstanding bottom lip and pushing it off top of sight pin (13) discard clip

Press down weapon sight spring piston (16) and remove sight pin (13) to right

Remove weapon sight (6), spring piston (16) and helical compression spring (15)

Using 3 mm end of stowed wrench, turn height adjustment screw (4) right until it separates from weapon sight (6) and separate sight base (5) and weapon sight

Fold rear sight (7) up. Turn windage screw (11) counterclockwise to move aperture of rear sight all the way left and remove retaining ring (8) on right side of rear sight by pushing retaining ring out with screwdriver. Discard retaining ring

Turn windage screw (11) clockwise to move aperture of rear sight (7) all the way right and remove retaining ring (12) on the left side of rear sight by pushing retaining ring out with screwdriver. Discard retaining ring.

Push rear sight (7) down onto spring piston (9). Turn windage screw (11) out of its threaded bearing on left side of sight base (2) and push out windage screw

Remove rear sight (7) spring piston (9), and helical compression spring (10) from sight base (2)

MAINTENANCE
LEAF SIGHT ASSEMBLY MAINTENANCE

INSPECTION

Inspect components for bends, breaks, cracks, damaged threads, and other damage

REPAIR OR REPLACEMENT

Replace defective parts as authorized by WP 0025 TM 9-1010-232-23P

MAINTENANCE
LEAF SIGHT ASSEMBLY MAINTENANCE
ASSEMBLY

Install helical compression spring and spring piston into rear sight bearing. Position rear sight with markings toward rear and push down rear sight onto sight base. Insert windage screw completely from right through right rear sight hinge and rear sight

Hold rear sight pushed down and turn windage screw with 3mm end of stowed hex key wrench into engagement with left sight hinge

Turn windage screw into sight base until right recess of windage screw is even with right side of rear sight

With screwdriver, press new retaining ring into recess of windage screw

Turn windage screw to right and push rear sight manually right until it engages retaining ring on windage screw

If left recess on windage screw is not yet visible, insert screwdriver between left rear sight hinge and rear sight and turn windage screw carefully clockwise until left recess on windage screw becomes visible

With screwdriver, press new retaining ring into left recess of windage screw

Check function of windage screw by rotating left and right. Rear sight must move correspondingly with minimum play

Fold rear sight up and down. It must properly engage in upper and lower position without play

Install sight base completely into weapon sight

Install height adjustment screw through sight base into weapon sight and turn screw counterclockwise with 3mm end of stowed hexagon key wrench completely into weapon sight

Install helical compression spring and spring piston into front of sight base

MAINTENANCE
LEAF SIGHT ASSEMBLY MAINTENANCE
ASSEMBLY (cont)

Position weapon sight with its bottom on spring piston and push down completely

Push sight pin from right side completely through sight base

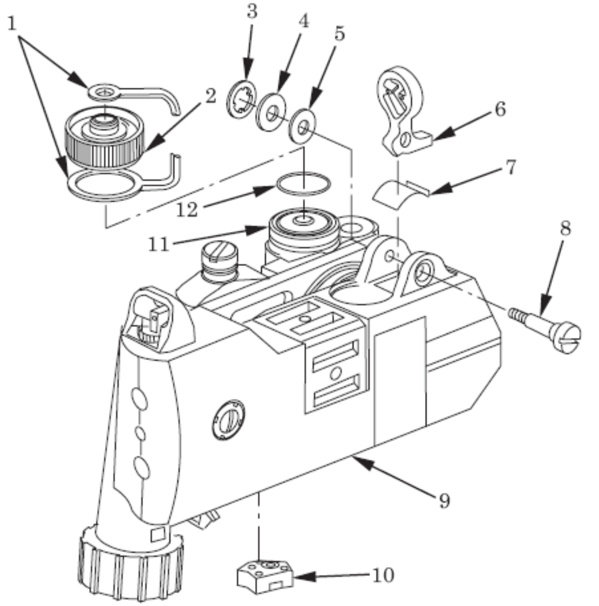
Slide new retaining clip from top into recess of protruding sight pin on left side of sight base

Check function by folding weapon sight up and down. Weapon sight must move without play and firmly engage in both upright and down positions

Align holes of sight base with holes in sight support

Install two screws using 3mm and of stowed hexagon wrench and tighten

MAINTENANCE
DAY/NIGHT SIGHT ASSEMBLY
DISASSEMBLY



REMOVE SMALL END OF RETAINING STRAP (1) FROM STUD OF BATTERY CAP (2)

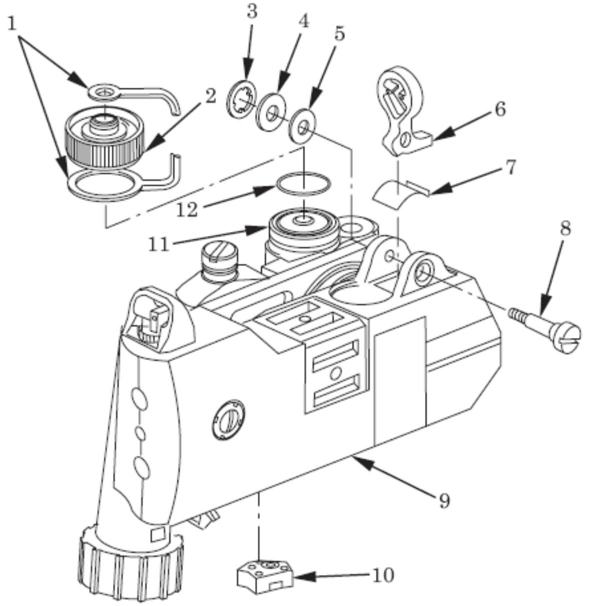
REMOVE BATTERY CAP (2)

REMOVE O-RING (12) FROM GROOVE OF BATTERY COMPARTMENT (11). DISCARD O-RING

REMOVE LARGE END OF RETAINING STRAP (1) FROM THREADS OF BATTERY COMPARTMENT(11)

IF DAMAGED, USE .050 KEY WRENCH AND REMOVE SAFETY BLOCK (10) DISCARED SAFETY BLOCK

MAINTENANCE
DAY/NIGHT SIGHT ASSEMBLY
DISASSEMBLY



REMOVE RETAINING RING (3) FROM REAR SIGHT SCREW (8). DISCARD REATINING RING

REMOVE FLAT WASHER (4) AND NYLON WASHER (5) WHILE TURNING REAR SIGHT SCREW (8) COUNTERCLOCKWISE. DISCARD FLAT WASHER AND NYLON WASHER

CONTINUE TO TURN REAR SIGHT SCREW (8) COUNTERCLOCKWISE AND REMOVE FROM SIGHT UNIT (9) DISCARD REAR SIGHT SCREW

REMOVE REAR SIGHT (6) AND REAR SIGHT SPRING (7) FROM SIGHT UNIT (9) DISCARD REAR SIGHT AND REAR SIGHT SPRING

MAINTENANCE
DAY/NIGHT SIGHT ASSEMBLY
INSPECTION

INSPECT COMPONENTS FOR BENDS,BREAKS,CRACKS,AND OTHER DAMAGE

REPAIR OR REPLACEMENT

REPLACE DEFECTIVE PARTS AS AUTHORIZED BY WP 0025

MAINTENANCE
DAY/NIGHT SIGHT ASSEMBLY
ASSEMBLY

Install new rear sight spring (7) into cutout of sight unit (9)

Install new rear sight (6) on top of rear sight spring

Lubricate threads of new rear sight screw with silicon compound and install screw into sight unit

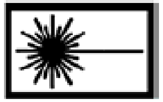
Install new nylon washer over threaded end of rear sight screw

Install new retaining ring into groove of rear sight screw

Rotate rear sight screw (8) to center rear sight and verify smooth operation. Ensure rear sight locks into both positions and fold rear sight into stowed position.

MAINTENANCE
DAY/NIGHT SIGHT ASSEMBLY
ASSEMBLY (cont)

WARNING



LASER LIGHT

For training mode the safety block must be installed with the blue side visible. For tactical made install the safety block with the black side visible. Do not stare into the laser beams. Do not look into the laser beams with binoculars or telescopes. Do not point laser beams at mirror-like surfaces. Do not shine laser beams into another person's eyes

If removed, install new safety block (10) and secure, using .050 key wrench

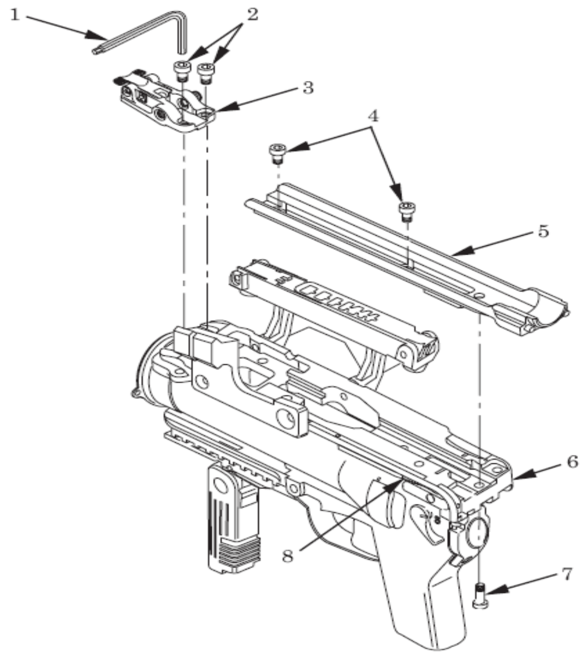
Install large end of retaining strap 91) over threads of battery compartment (11)

Install new o-ring (12) to groove of battery compartment (11)

Install battery cap (2)

Install small end of retaining strap (1) over stud of battery cap (2)

MAINTENANCE
M16 MOUNTING ADAPTER ASSEMBLY
REMOVAL



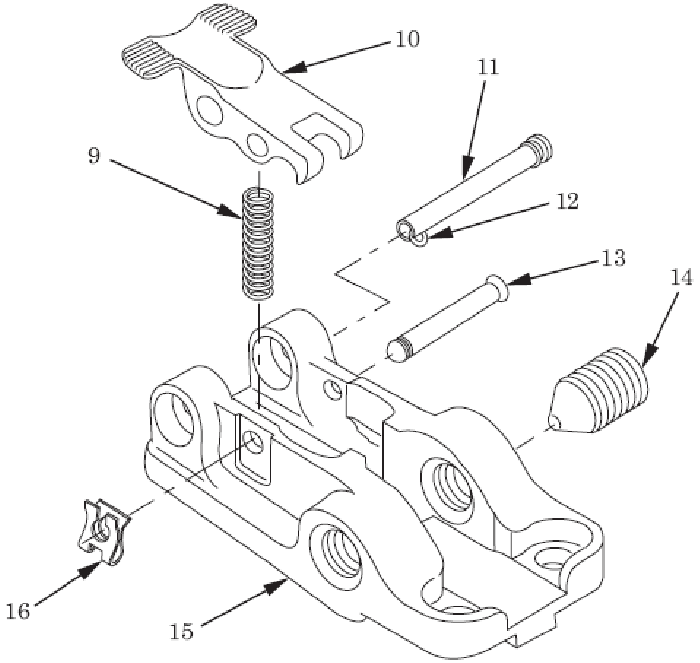
Remove stowed hexagon key wrench (1) from rear of receiver (6)

Using 5mm end of stowed hexagon wrench (1) remove two socket head capscrews (4) and socket head capscrew (7)

Press buttstock release (8) and remove rear mounting bracket (5) from receiver (6)

Using 5mm end of stowed hexagon key wrench (1) remove two socket head capscrews (2). Lift front mounting adapter (3) from receiver (6)

MAINTENANCE
M16 MOUNTING ADAPTER ASSEMBLY
DISASSEMBLY



Push/pull front locking pin (11) from left to right. Slide front locking pin to the right until it stops to release latch (10)

Remove clip (16) from headed straight pin (13)

Remove headed straight pin (13), latch (10), and helical compression spring (9) from mounting bracket (15)

Depress spring (12) on left end of front locking pin (11) and pull front locking pin from right side of front mounting bracket (15)

If damaged, remove lock screw (14) from front mounting bracket (15). Discard lock screw.

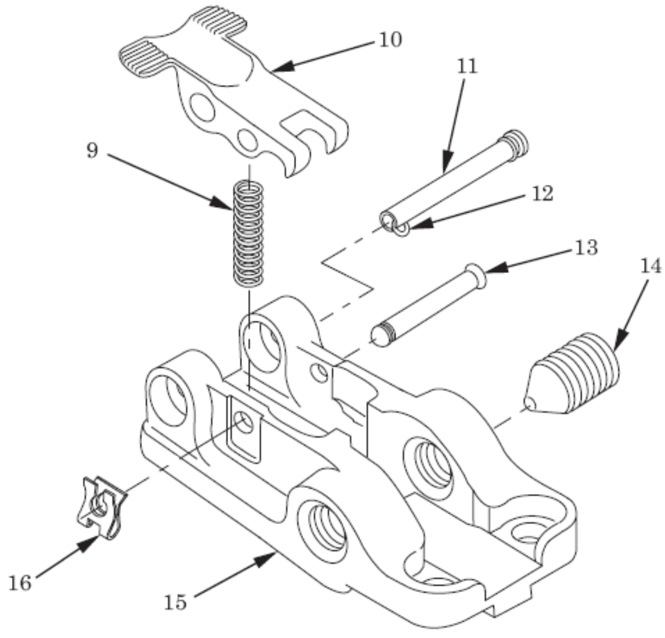
MAINTENANCE
M16 MOUNTING ADAPTER ASSEMBLY
INSPECTION

Inspect components for burrs ,breaks, bends, and damaged threads.

REPAIR OR REPLACEMENT

Replace defective parts as authorized by WP 0025

MAINTENANCE
M16 MOUNTING ADAPTER ASSEMBLY
ASSEMBLY



If removed, install new lock screw (14) in front mounting bracket (15)

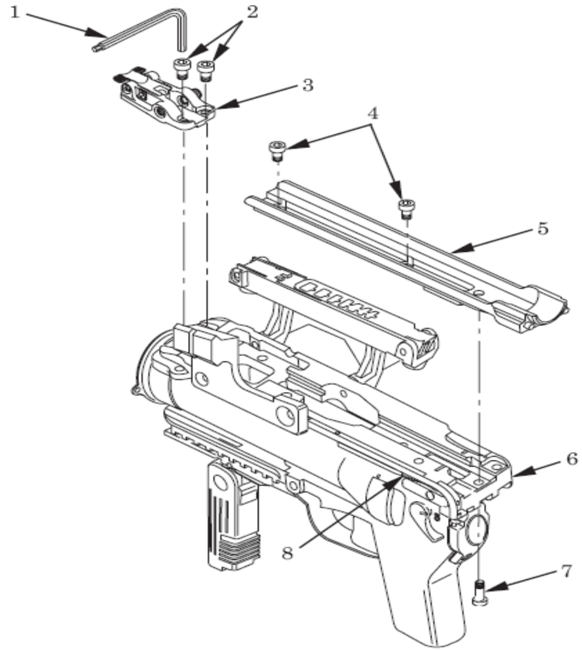
Position helical compression spring (9) and latch (10) in front mounting bracket (15). Ensure that helical compression spring fits into hole in latch and recess in base of front mounting bracket.

Install headed straight pin (13) in front mounting bracket (15)

Install clip (16) on headed straight pin (13) from the top

Depress spring (12) on front locking pin (11) and install pin from right side into front hole of front mounting bracket (15)

MAINTENANCE
M16 MOUNTING ADAPTER ASSEMBLY
INSTALLATION



Position front mounting adapter (3) over cutout in front part of receiver (6) and align holes. Install two socket head
Capscrews (2) to secure front mounting adapter. Tighten using 5mm end of stowed hexagon wrench (1)

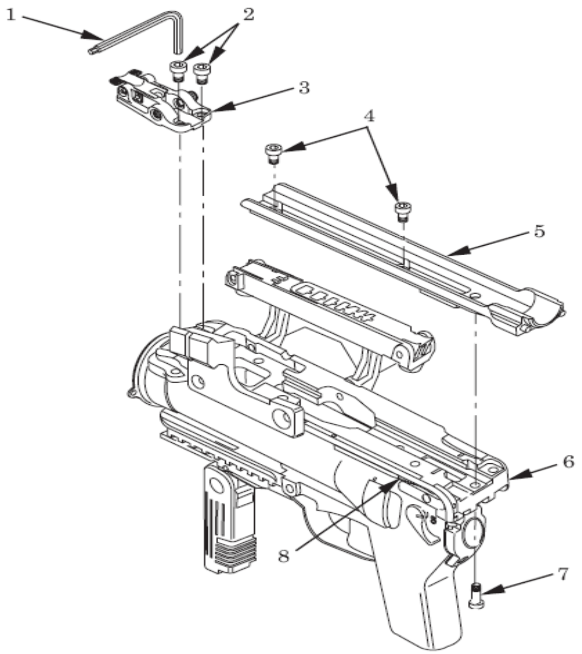
Press buttstock release (8) and position rear mounting bracket (5) in slot in rear of receiver (6), aligning holes

Install two shorter socket head capscrews (4) in front of rear mounting bracket (5). Install from top of rear mounting bracket. Tighten using 5mm end of stowed wrench (1)

Install longer socket head capscrews (7) in rear of rear mounting bracket (5). Install from bottom of receiver (6). Tighten using 5mm end of stowed wrench (1)

Install stowed hexagon key wrench (1) in rear of receiver (6)

MAINTENANCE
M4 MOUNTING ADAPTER ASSEMBLY
REMOVAL



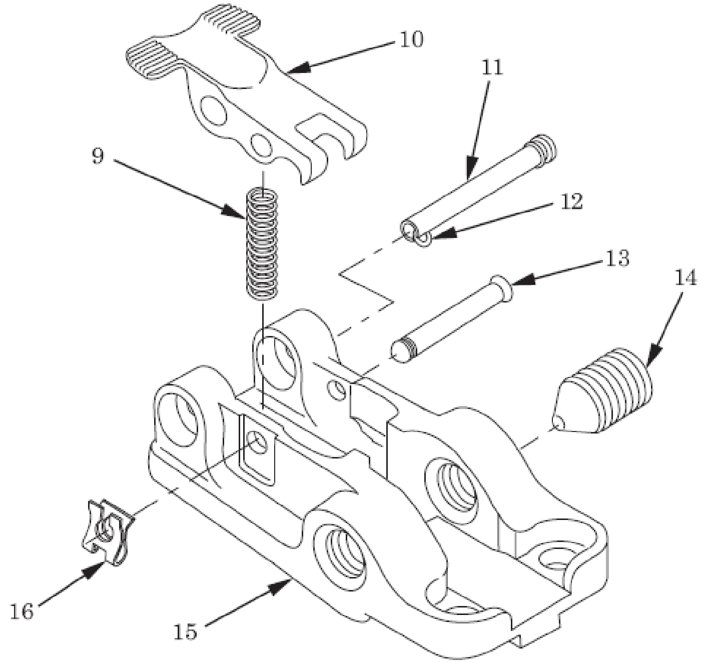
Remove stowed hexagon key wrench (1) from rear of receiver (6)

Using 5mm end of stowed hexagon wrench (1) remove two socket head capscrews (4) and socket head capscrew (7)

Press buttstock release (8) and remove rear mounting bracket (5) from receiver (6)

Using 5mm end of stowed hexagon key wrench (1) remove two socket head capscrews (2). Lift front mounting adapter (3) from receiver (6)

MAINTENANCE
M4 MOUNTING ADAPTER ASSEMBLY
DISASSEMBLY



Push/pull front locking pin (11) from left to right. Slide front locking pin to the right until it stops to release latch (10)

Remove clip (16) from headed straight pin (13)

Remove headed straight pin (13), latch (10), and helical compression spring (9) from mounting bracket (15)

Depress spring (12) on left end of front locking pin (11) and pull front locking pin from right side of front mounting bracket (15)

If damaged, remove lock screw (14) from front mounting bracket (15). Discard lock screw.

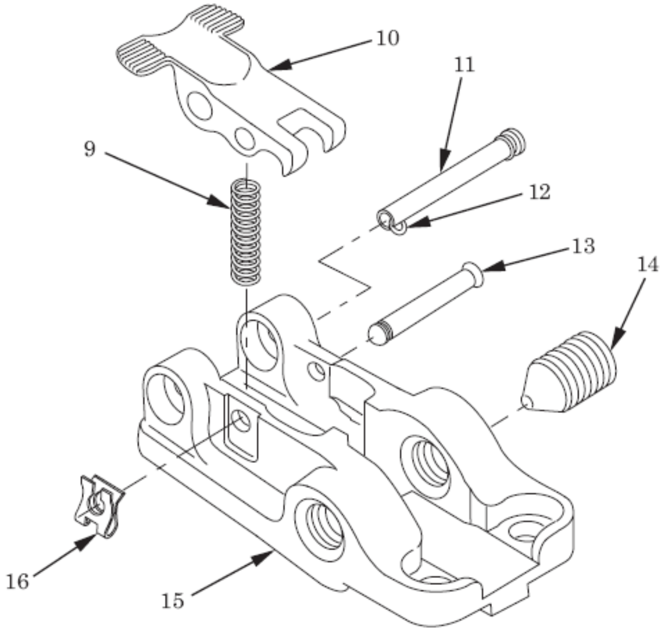
MAINTENANCE
M4 MOUNTING ADAPTER ASSEMBLY
INSPECTION

Inspect components for burrs ,breaks, bends, and damaged threads.

REPAIR OR REPLACEMENT

Replace defective parts as authorized by WP 0025

MAINTENANCE
M4 MOUNTING ADAPTER ASSEMBLY
ASSEMBLY



If removed, install new lock screw (14) in front mounting bracket (15)

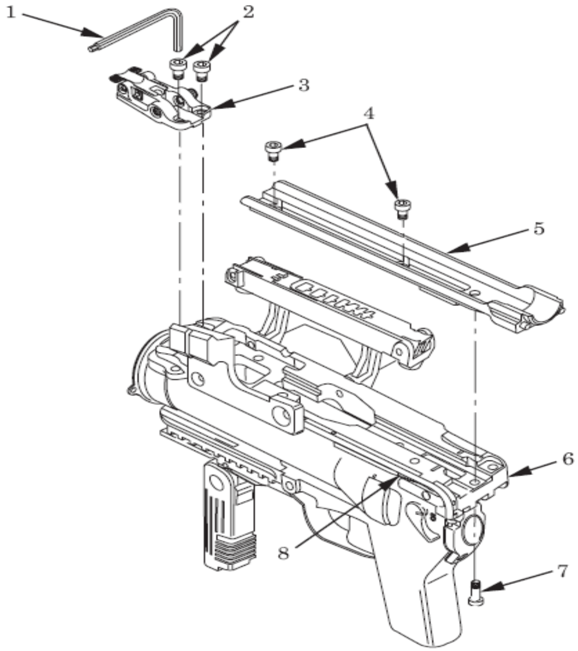
Position helical compression spring (9) and latch (10) in front mounting bracket (15). Ensure that helical compression spring fits into hole in latch and recess in base of front mounting bracket.

Install headed straight pin (13) in front mounting bracket (15)

Install clip (16) on headed straight pin (13) from the top

Depress spring (12) on front locking pin (11) and install pin from right side into front hole of front mounting bracket (15)

MAINTENANCE
M4 MOUNTING ADAPTER ASSEMBLY
INSTALLATION



Position front mounting adapter (3) over cutout in front part of receiver (6) and align holes. Install two socket head
Capscrews (2) to secure front mounting adapter. Tighten using 5mm end of stowed hexagon wrench (1)

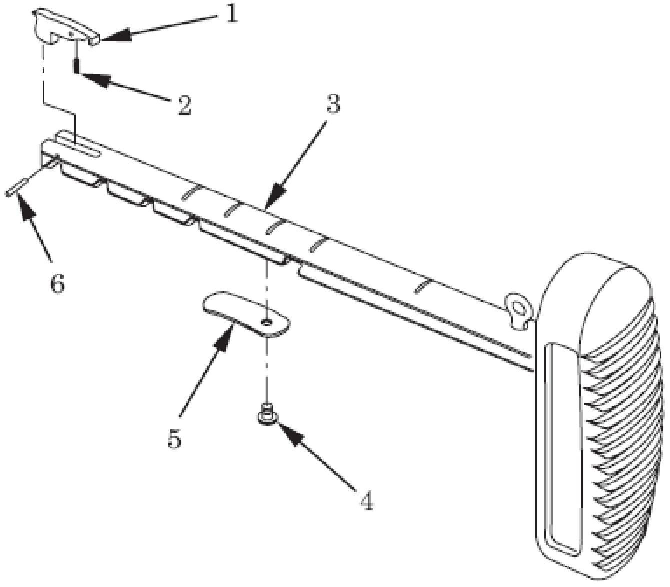
Press buttstock release (8) and position rear mounting bracket (5) in slot in rear of receiver (6), aligning holes

Install two shorter socket head capscrews (4) in front of rear mounting bracket (5). Install from top of rear mounting bracket. Tighten using 5mm end of stowed wrench (1)

Install longer socket head capscrews (7) in rear of rear mounting bracket (5). Install from bottom of receiver (6). Tighten using 5mm end of stowed wrench (1)

Install stowed hexagon key wrench (1) in rear of receiver (6)

MAINTENANCE
BUTTSTOCK ASSEMBLY
DISASSEMBLY



If spring tension is lost, use 2.5 mm key wrench to remove screw (4) and flat spring (5) discard flat spring

If damage exists, remove spring pin (6) with 3/32 in punch and remove latch (1) and latch spring (2) from buttstock (3). Discard spring pin and damaged parts.

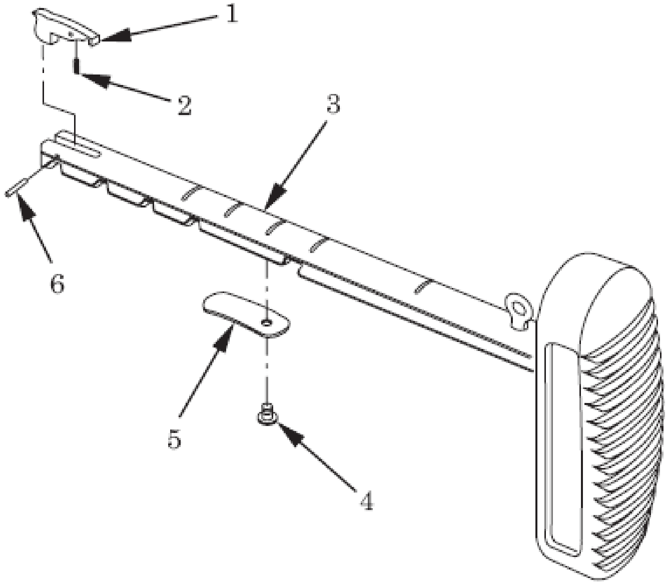
MAINTENANCE
BUTTSTOCK ASSEMBLY
INSPECTION

Inspect components for burrs, bends, cracks, and damaged threads.

REPAIR OR REPLACEMENT

Replace defective parts as authorized by WP 0025

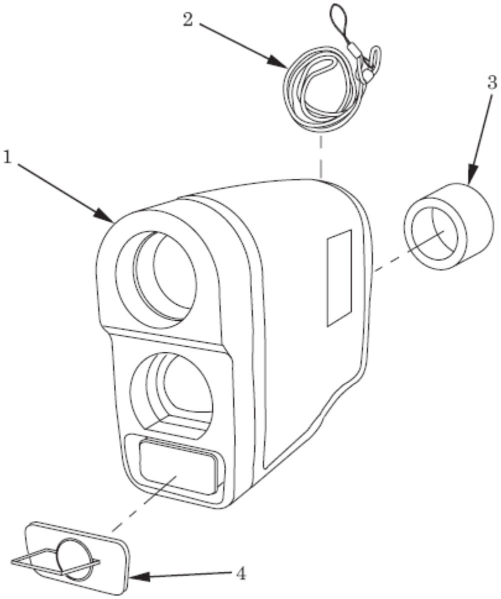
MAINTENANCE
BUTTSTOCK ASSEMBLY
ASSEMBLY



If removed install latch spring (2) and latch (1) to buttstock (3). Secure with new spring pin (6).

If removed, install new flat spring (5) and secure with screw (4) using 2.5mm key wrench

MAINTENANCE
LASER RANGE FINDER ASSEMBLY
DISASSEMBLY

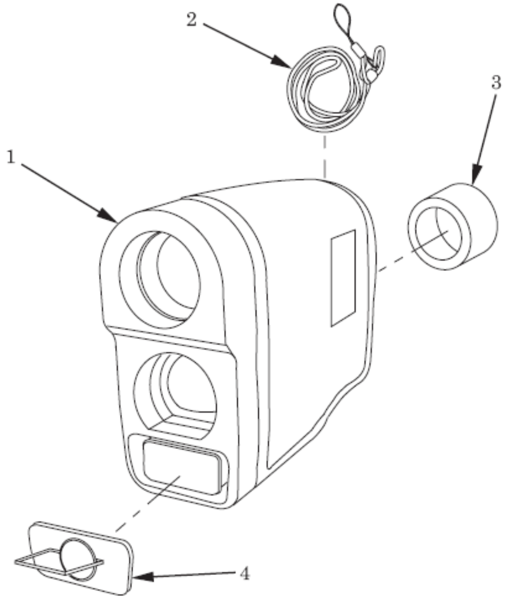


If necessary to replace battery, remove battery compartment cover (4) from Laser Range Finder (LRF) (1).
Remove battery and discard in accordance with unit SOP

If damaged, remove and discard eyecup (3)

If damaged, remove and discard carrying strap (2)

MAINTENANCE
LASER RANGE FINDER ASSEMBLY
ASSEMBLY

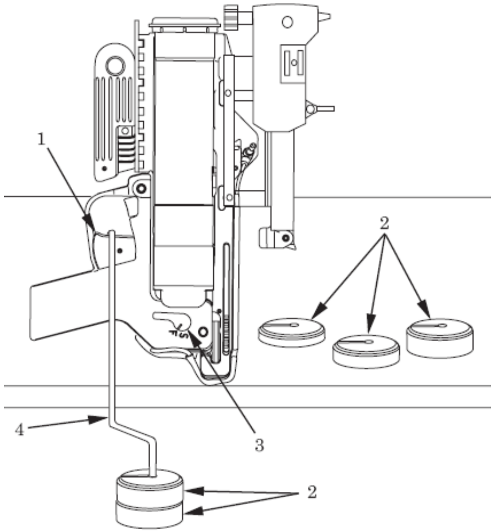


If removed, install new carrying strap (2) to LRF (1)

If removed, install new eyecup (3) to LRF (1)

If removed, install new battery into LRF (1). Install battery compartment cover (4)

MAINTENANCE
ANNUAL TEST REQUIREMENT



NOTE

MINIMUM TRIGGER PULL IS 11.25 LBS MAXIMUM IS 15.75 LBS

Ensure weapon is cleared

Place selector lever (3) on “F” (fire)

Place grenade launcher on edge of table, barrel end up. Support grenade launcher firmly with hand

Place rod (4) on trigger (1) and let hang freely

Begin adding weights (2) to rod (4) until trigger (1) releases firing pin. Record the weight.

MAINTENANCE
ANNUAL TEST REQUIREMENT
BARREL BORE

Check for bore constriction using bore constriction tool (WP 0022). Clean barrel if necessary

Carefully insert bore constriction tool into chamber end of barrel and allow to slide to muzzle end of barrel. Tool should pass through barrel from end to end.

Replace barrel if bore constriction tool fails to pass smoothly through entire barrel.

TACOM

Mobility and Firepower
for America's Army

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